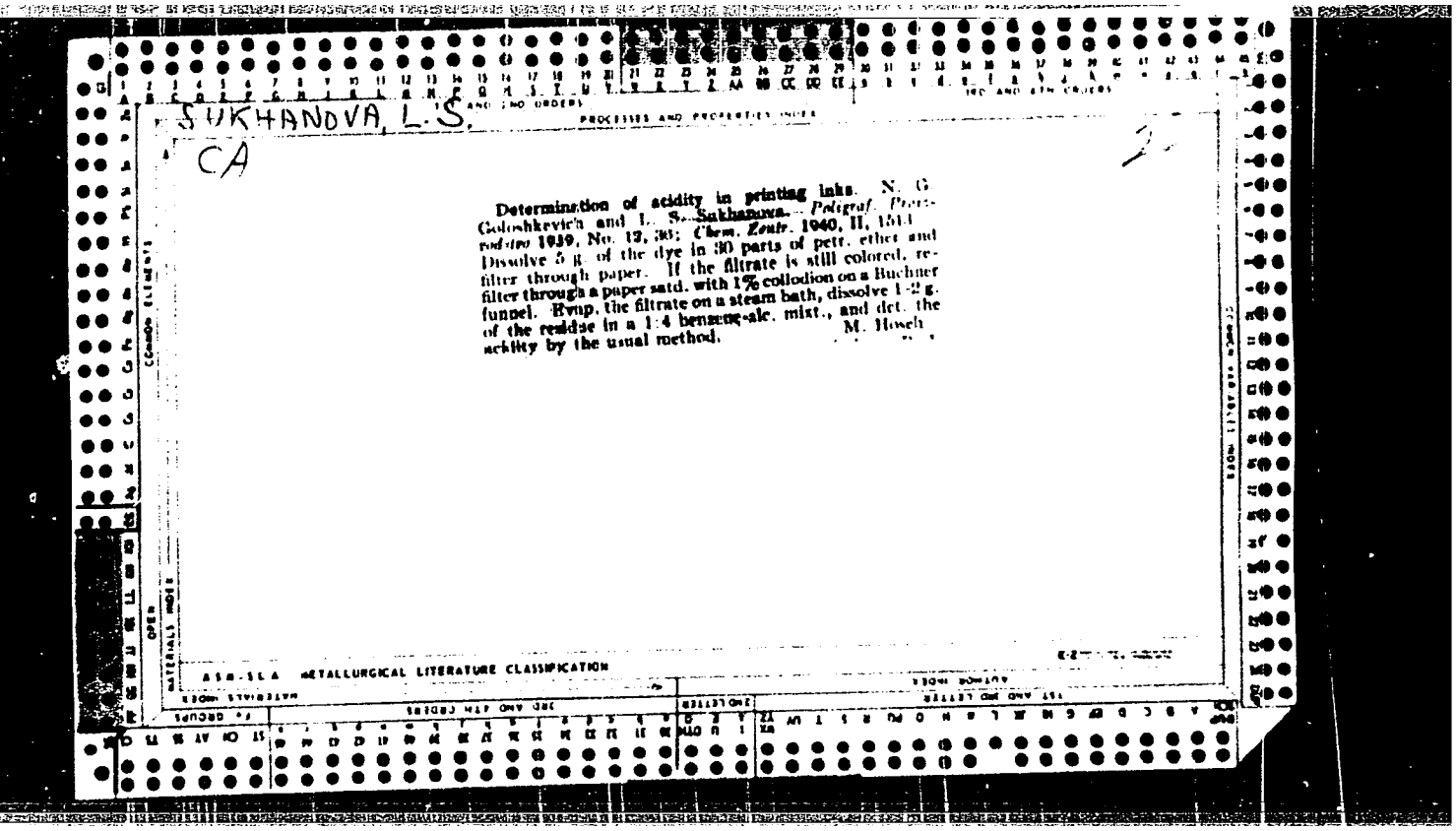

SUKHANOVA, L. S.

CA

Determination of acidity in printing inks. N. G. Golovkevich and L. S. Sukhanova. *Poligraf. Proizvodstvo* 1939, No. 12, 35; *Chem. Zentr.* 1940, II, 1514. Dissolve 5 g. of the dye in 30 parts of petr. ether and filter through paper. If the filtrate is still colored, refilter through a paper satd. with 1% collodion on a Buchner funnel. Evap. the filtrate on a steam bath, dissolve 1-2 g. of the residue in a 1:4 benzene-alc. mixt., and det. the acidity by the usual method. M. Hosch

A5A-5L1A METALLURGICAL LITERATURE CLASSIFICATION

2A SUKHANOVA, L. S.

2.6

Determination of the degree of acidity in offset colors N. G. Golushkevich and L. S. Sukhanova: *Poligraf. Proizvodstvo* 1948, No. 11, 23–4; *Chem. Zentr.* 1949, II, 80. The method is independent of the color and the degree of dispersion of the pigment. A 10-g. sample is dissolved in 70 cc. of benzene in a porcelain dish. The pigment is sepd. by the addn. of 80–90% alc. and filtered off. The solvent is distd. off from the filtrate until the vol. is reduced to 30 cc. The residue is then evapd. A 0.3-g. portion of the residue is dissolved in a neutral alc.-benzene mixt. (1:4) and titrated with 0.1 *N* alc. KOH with alkali blue. The acidity of 1 g. of varnish is calcd. according to the formula: $K = a \cdot T \cdot \frac{}{}$ where a is the amt. of KOH in cc., b is the wt. of sample, and T is the titer of alc. KOH in mg. The degree of acidity of the pigment is calcd. from the pigment-varnish ratio. The ratio is 1:0.3 for Cr pigments, 1:1.2 or 1:1.0 for lacquers, and 1:0.75 for Milori. M. G. Moore

3(4)

AUTHOR: Sukhanova, L. S. SOV/6-59-6-11/22

TITLE: From the Experience in Establishing the Graphic Phototriangulation Network (Iz opyta postroyeniya graficheskikh fototriangulyatsionnykh setey)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 6, pp 41-43 (USSR)

ABSTRACT: The author has been working for 27 years at concentrating the horizontal photo control according to the method of graphic phototriangulation, complying with the standards at 200% on an average with a good quality of work. She reports here on her working method. At first she collects all data. She classifies all aeronegatives and aerial photographs by the routes, and does the pin-pricking on the aeronegatives. Then she makes the prints of the central directions. Next she develops rhombic one-route nets. Before reducing the nets, she checks the base and carries out the final balancing of the photogrammetric nets by means of the prints of the central directions. Finally she fills a form. In it she indicates the method of building up the nets of plane phototriangulation, the net scale, the distribution, the existence and size of markings. The whole is then checked by the brigadier.

Card 1/1

S/121/62/000/001/002/004
D040/D113

AUTHORS: Krivoukhov, V.A., Yegorov, S.V., Rudnov, A.V., and Sukhanova, M.A.

TITLE: Ways of improving the effect of coolants on cutting tools

PERIODICAL: Stanki i instrument, no. 1, 1962, 30-33

TEXT: Methods of improving the effect of coolants on cutting tools are discussed. As stated in investigations conducted by VNII and other organizations, the effect of the application of cutting coolants by any of the four existing methods (by falling jet, high- and low-pressure, and fog) differs under different cutting conditions and greatly depends on the physical property of the metal being machined, the material of the tool edge, depth of cut, etc. The cutting laboratory of VNII states that the durability of cutters, when the cutting fluid is cooled down to 1-2°C, is more than doubled in comparison with the cutting process where the cutting fluid temperature is 20°C. In intermittent turning of heat-resistant ЭИ 437Б (EI437B) alloy with cutters of Р 18 (R18) steel and high-pressure cooling with aq. l fluid (5C% aqueous glycol solution), the durability of cutters was 2.5-3 times

Card 1/3

methods; (3) A stable required temperature of the cutting fluid is important for raising the durability of cutting tools. There are 5 figures and 2 references: 2 Soviet and 1 non-Soviet-bloc. The English-language reference is: Boston O., Gilbert, W., Influence of Applying Cutting Fluids of Different Temperatures when Turning Steel, "Transactions of the ASME", v. 67, no. 4, 1945, p. 217-224.

Card 3/3

15.7300
~~5 (2), 15 (7)~~

S/064/59/000/07/009/035
B005/B123

AUTHORS: Shtern, M. A., Sukhanova, M. V.

TITLE: On the Production of Molybdate-chrome Red

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 7, pp 584 - 586 (USSR)

ABSTRACT: Molybdate-chrome red consisting of lead chromate, -molybdate, and -sulfate, is one of the most important inorganic red pigments. The authors investigated the dependence of the chrome red color on the velocity of precipitation. At the same time the influence of the order of sodium sulfate additions to the lead chromate solution was investigated. It was found that by adding the total amount of sodium sulfate at the beginning of precipitation, the precipitation of the undesired yellow monoclinic form of lead chromate can be prevented. Precipitations were obtained at 20° in a medium of pH 2. The concentration of the solutions was 0.1 m. While mixing it intensively, a mixture of the solutions of sodium bichromate, ammonium molybdate, sodium sulfate, and soda was added to the lead nitrate solution with varying velocity. In all experiments a pigment with constant composition 7 $PbCrO_4 . PbMoO_4 . PbSO_4$ was obtained. By

Card 1/3

adding soda a constant pH-value of the medium is achieved during precipitation. Table 1 shows the color changes of chrome red in dependence of the velocity of precipitation. Covering power and color intensity of obtained pigments are specified as well. It became evident that if the precipitation is retarded from 2-3 minutes to 25-30 minutes the chrome red color tone becomes deeper. During a further retardation the color tone of the pigment changes from light red to brown-orange. Investigations in the electron microscope (Figs 1-3) showed that the color change is caused by a recrystallization of the pigment grains to rod-like crystals during slow precipitation. Chrome red produced at an optimum precipitation rate is pure light red. When grinding it with a spatula, the pigment, however, shows yellow inclusions that prove the inhomogeneity of pigment grains in the mass. The authors investigated the influence of the reaction conditions on the color and the homogeneity of the chrome red coloring (Table 2). It appeared that if the majority of the mixture to be used for precipitation is added quickly to the lead nitrate solution, homogeneous particles are formed in the pigment mass. A sufficiently homogeneous pigment

that is still red (not yet orange) is obtained by quickly adding a maximum of half the precipitant. Table 3 shows the influence of the pH-value of the medium at the end of the precipitation on the pigment color. The optimum pH-value lies between 1.8-2.2. With higher or lower pH orange-red pigments are formed. The authors found that additions of 1-2% aluminum oxide or silicic acid stabilize the pigment adequately so that during long storage in the parent solution and drying no color changes occur. Sodium silicate gives the pigment a more saturated color. As a summary of their investigations the authors specify the optimum technical conditions for the production of molybdate-chrome red. The method described has already been tested and introduced into the industry. There are 3 figures, 3 tables, and 5 references.

ASSOCIATION: Leningradskiy filial GIPI (Leningrad Branch of the State Design and Planning Scientific Research Institute of Varnish and Paint Industry)

SUKHANOVA, M.V.; NOVIKOVA, G.G.

Increasing the sedimentation stability of enamel paints containing barium and iron oxide reds by means of the addition of surface-active agents. Lakokras. mat. i ikh prim. no.4:26-28 '63. (MIRA 16:10)

SANIN, A.A.; SUKHANOVA, N.N.

Differential amplitude analyzers for impulses with low resolving power. Vest. Mosk.un. 8 no.8:105-108 Ag '53. (MLRA 6:11)

1. Fizicheskiy fakul'tet. (Electric measurements)

USSR / Microbiology. Medical and Veterinary Microbiology. F-5

Abs Jour: Referat Zh.-Biol., No 6, 25 March, 1957, 22053

Author : Kuzin, L.D., Berezhnoi, N.F., Sukhanova, N.P.
Inst :
Title : On the Prospectives of Obtaining a New Vaccine Against Anthrax of Farm Animals (Communication 2).

Orig Pub: Tr. Chkalovskogo s.-kh. in-ta, 1955, 7, 205-212

Abstract: A nonencapsulated avirulent culture of anthrax bacilli, whose properties are stably preserved, was obtained from the virulent strain #343 by means of direct cultivation. It is virulent only to white mice in a dose of 0.2 ml. This culture can form a reliable immunity in animals inoculated with it (intramuscularly, twice). The use of a 20% camphor oil solution stimulates the nervous system and assures immunity even in animals inoculated once. The spore vaccine, unlike the avirulent 24-hour culture, causes death in 11-12% of the inoculated guinea pigs. Part 1 see Ref. Zh.-Biol., 1955, 40326.

Card : 1/1

SUKHANOVA, N.S.

SKOBLIN, A.P., kandidat meditsinskikh nauk; SUKHANOVA, N.S.

Treating fractures of the neck of the femur in children. Ortop. travm. i protez. 17 no.6:111-112 N-D '56. (MLRA 10:2)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta ortopedii i travmatologii im. M.I.Sitenko (direktor - zasluzhennyy deyatel' nauki professor N.P.Novachenko)
(FEMUR--FRACTURES)

SUKHANOVA, N.P.

Seasonal variability of litter and lysimetric waters in pine forests. Bot. zhur. 50 no.12:1735-1741 D '65.
(MIRA 19:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

MEDVEDEV, V.I.; SAVINA, L.N.; SUKHANOVA, N.V.

Physiological analysis of the vibration of vocal folds (with reference to Husson's theory). Probl.fiziol.akust. 4:208-215 '59.
(MIRA 13:5)

1. Institut evolyutsionnoy fiziologii imeni I.M. Sechenova AN SSSR, Leningrad.

(VOICE)

SUKHANOVA, N.V.

Motility of the nervous processes in the motor analysor of children of preschool age. Zhur.vys.nerv.deiat. 9 no.5:679-683 S-O '59. (MIRA 13:3)

1. Institut evolyutsionnoy fiziologii Akademii nauk SSSR im. I.M. Sechenova, Leningrad.
(NERVOUS SYSTEM physiol.)

SUKHANOVA, N.V.

Characteristics of the formation of the motor component in a child's verbal reaction. Zhur. vys. nerv. deiat. 11 no.5:855-859 S-O '61. (MIRA 15:1)

1. Sechenov Institute of Evolutionary Physiology, U.S.S.R. Academy of Sciences, Leningrad.
(ELECTROPHYSIOLOGY) (SPEECH)

SUKHANOVA, O.I. (g.Khimki)

Polytechnical training in the teaching of chemistry. Khim.v shkole 11 no.4:67-68 Jl '56. (MLRA 9:9)
(Chemistry--Study and teaching)

GRUM-GRZHIMAYLO, S.V.; BRILLIANTOV, N.A.; SVIRIDOVA, R.K.; SUKHANOVA, O.N.

Changes in the absorption spectrum arising when the temperature of some nickel-colored synthetic crystals is lowered. Kristallografiia 5 no.2:288-294 Mr-Ap '60. (MIRA 13:9)

1. Institut kristallografii AN SSSR i Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Nickel sulfate--Spectra)

Absorption spectra ...

the iron beryls are not observed in the blue aquamarine. At 77°K very weak narrow absorption bands are observed which become more distinct at 4.2°K. In all samples the extraordinary waves are polarized in the 17190 and 18620 cm^{-1} bands, particularly in the green-yellow beryl no.209 having a maximum thickness of 6.83 mm. There is also a weak unpolarized band at 21520 cm^{-1}. The 18620 and 21520 bands are not given in the work of Dvir and Low. In all samples the extraordinary waves are completely polarized in the 26780 cm^{-1} band. Dvir and Low observed bands at 26500 and 17590 cm^{-1} which are sufficiently near to the authors' at 26780 and 17190 cm^{-1}. No further change in the absorption spectra were discovered on reducing the temperature to 1.7°K. The five absorption bands presented by Dvir and Low in their paper were interpreted as due to transitions between levels in Fe^{3+} ions, separated in the octahedral crystal field. The bands observed near to those of Dvir and Low are interpreted as the band 26780 cm^{-1} transition in Fe^{3+} $^6A_0(d\gamma^3 d\gamma^2) \rightarrow {}^4T_2(d\gamma^3 d\gamma^2)$ and the band 17190 cm^{-1} as the $^6A_0(d\gamma^3 d\gamma^2) \rightarrow {}^4T_2(d\gamma^4 d\gamma)$ transition.

Card 2/3

S/051/63/014/002/007/026
E039/E120

AUTHORS: Grum-Grzhimaylo, S.V., Brilliantov, N.A., Sviridov, D.T., Sviridova, R.K., and Sukhanova, O.N.

TITLE: Absorption spectra of crystals containing Fe^{3+} for temperatures down to 1.7 °K

PERIODICAL: Optika i spektroskopiya, v.14, no.2, 1963, 228-233

TEXT: The absorption spectra of demantoid-garnet ($Ca_3Fe_2Si_3O_{12}$), vesuvianite ($H_2Ca_{10}(MgFe)Al_4Si_6O_{18}$) and epidote ($Ca_2(AlFe)O(Si\ O_4)[Si_2O_7]OH$) are obtained at temperatures of 290, 77, 4.2 and 1.7 °K. The spectra were obtained in polarized light using a СФ-4 (SF-4) spectrograph for observations at 290 °K, and quartz ИСП-22 (ISP-22) and glass ISP-51 spectrographs at the lower temperatures. In these crystals the color is produced by the isomorphous substitution of Fe^{3+} ions for Al^{3+}. At room temperature the absorption spectra of these crystals show wide bands characteristic of material containing Fe^{3+} ions. At low temperatures these bands are narrower. The position of these bands for demantoid and epidote is shown in the table.

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Position of narrow absorption bands, cm^{-1}

Демантоид (Demantoid)

I	1.7°	22760 (с)*	22970 (ср)	23060 (ср)	23300 (сл)	23550 (о. сл)	23720 (сл)	23970 (сл)	24450 (ср)
	4.2	(с)	(ср)	(ср)	(сл)	(о. сл)	(сл)	(сл)	(ср)
	77	(с)	(ср)	(ср)	(сл)	(о. сл)	(о. сл)	(сл)	(сл)
II	1.7	25930 (с)	26090 (о. сл)	26270 (ср)	26490 (сл)	26730 (ср)	26980 (о. сл)	27300 (ср)	
	4.2	(с)	(о. сл)	(ср)	(сл)	(ср)	(о. сл)	(ср)	
	77	(с)	(о. сл)	(сл)	(о, сл)	(ср)	—	—	

Эпидот (Epidot)

	band I полоса	band II полоса	band III полоса	band IV полоса (поляризована **) (polarized)
1.7°	21500 (с)	22100 (с)	22620 (о. сл)	23040 (сл)
4.2	21500 (с)	22100 (с)	22620 (о. сл)	23040 (сл)
77	21300 (ср)	22030 (о)	22620 (о. сл)	—
290	21080 (сл) (р)	21950 (ср) (р)	—	—

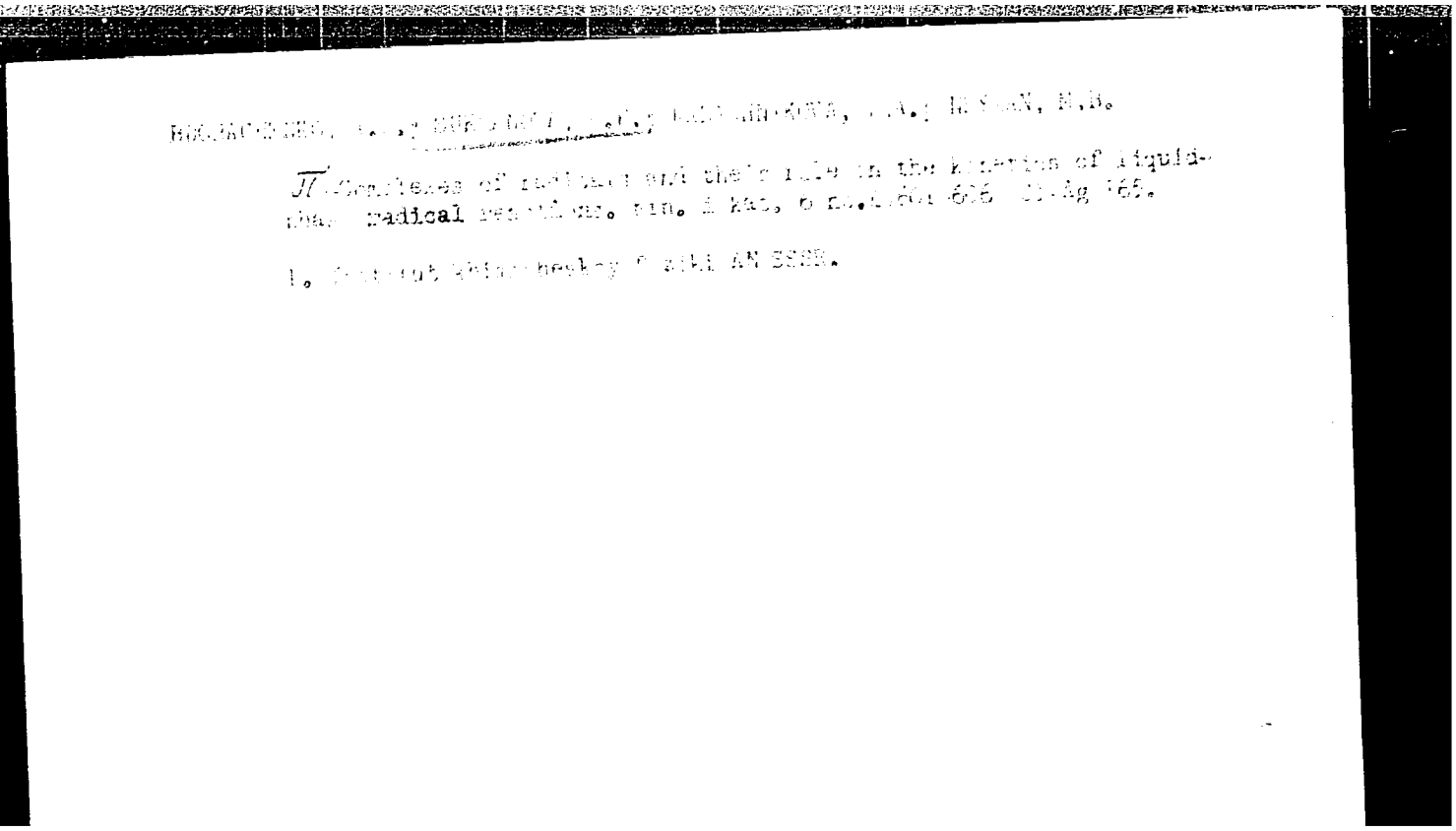
с - strong, ср - medium, сл - weak, о. сл - very weak, р - diffuse.

Card 3/3

PUCHACHENKO, A.L.; SUKHANOVA, O.P.

Hydrogen bond in radicals with the participation of an unpaired electron. Zhur. struk. khim. 6 no.1:32-38 Ja-F '65.
(MIRA 18:12)

1. Institut khimicheskoy fiziki AN SSSR. Submitted November 25, 1963.



S/203/61/001/006/021/021
D055/D113

AUTHOR: Sukhanova, R.D.

TITLE: The ionospheric effect of the solar eclipse of February 15, 1961, according to observations made in Salekhard

PERIODICAL: Geomagnetizm i aeronomiya, v. 1, no. 6, 1961, 1016-1017

TEXT: On February 15, 1961, the day of the solar eclipse, and the preceding and following days, observations at the Salekhard Ionospheric Station ($\varphi_N = 66^\circ 32'$, $\lambda_E = 66^\circ 42'$) were made according to a special program: every five minutes between 10 and 16 hours local time on February 14, 15 and 16, and continuously from 30 min., before the optical eclipse began, to 30 min. after it ended. The Salekhard Station has an ANC -247 (AIS-247) ionosonde, whose frequency range is 1-18 Mc, with a 2.5 kw pulse, a sampling speed of 20 sec., altitude marks every 50 km and a ceiling of 750 km. Photorecording was made on a 35 mm film. The maximum phase of the optical eclipse on the Earth's surface at Salekhard was 0.91. The ionospheric

Card 1/3

S/139/62/000/003/014/021
E039/E420

AUTHORS: Veraksa, V.I., Lange, V.N., Sukhanova, R.V.

TITLE: Some characteristics of the microhardness of single crystals of tellurium with small admixtures of antimony

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika, no.3, 1962, 124-126

TEXT: The effect of small admixtures on the properties of semiconductors in general is discussed and published work on tellurium alloys reviewed. The work described in this paper was undertaken on the grounds that changes in mechanical properties must be closely connected with structural changes in the lattice of the alloys. Samples of the binary alloy Te-Sb were prepared from vacuum distilled materials mixed for half an hour at 500°C with an electromagnetic vibrator. Single crystals were then grown and annealed for 10 hours at 300°C. Two series of microhardness tests were carried out and the results are expressed in terms of hardness relative to pure tellurium as unity. As the antimony content increases there is an initial decrease in hardness to about 0.6 for 0.002% Sb rising to

Card 1/2

L 09128-67 EWT(m)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AP6032617 SOURCE CODE: UR/0126/66/022/003/0380/0391 47

AUTHOR: Kirenskiy, L. V.; Pyn'ko, V. G.; Sukhanova, R. V.; Sivkov, N. I.; Pyn'ko, G. P.; Edel'man, I. S.; Komalov, A. S.; Kan, S. V.; Syrova, N. I.; Zvegintsev, A. G.

ORG: Institute of Physics SO AN SSSR (Institut fiziki SO AN SSSR); Krasnoyarsk Pedagogical Institute (Krasnoyarskiy pedinstitut)

TITLE: Epitaxial films of iron, nickel and cobalt [report presented at the Conference on Physics of Ferro- and Antiferromagnetism, Sverdlovsk, 5-7 July 1965]

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 3, 1966, 380-391

TOPIC TAGS: magnetic anisotropy, epitaxial growing, hysteresis loop, metal film

ABSTRACT: The authors study the epitaxial growth of iron, nickel and cobalt films thermally vaporized onto ionic crystals split in air and in a vacuum. It is shown that when the substrates are heated in a vacuum of 10^{-4} mm Hg, the surface state is changed with a favorable effect on epitaxy. The phase composition of the film may be controlled by proper selection of the substrate. The fields of anisotropy of the films are measured and the effect which application of a magnetic field during vaporization has on the magnetic anisotropy of the films is studied. The domain structure of the films and its dynamics are analyzed and the results are used as a basis for explaining the shape of hysteresis loops. The coercive force is measured in films of various thickness. It is shown that the coercive force of the films is always much less than the field of anisotropy and is approximately inversely proportional to the saturation magnetization. Orig. art. has: 13 figures, 1 table, 5 formulas.

SUB CODE: 11, 20/ SUBM DATE: 30Jul65/ ORIG REF: 004/ OTH REF: 007

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001653810010-6"

L 15385-66 EWT(1)/EWT(m)/EWP(e)/T/EWP(t)/EWP(b) IJP(c) JD/HW/GG

ACC NR: AP6004462 SOURCE CODE: UR/0048/66/030/001/0034/0036

AUTHOR: Kirenskiy,L.V.; Sukhanova, R.V.; Pyn'ko, G.P.

ORG: Institute of Physics, Siberian Section of the Academy of Sciences, SSSR (Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Domain structure of cobalt films grown on NaCl crystals /Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic Films held at Irkutsk 10 July to 15 July, 1964/

SOURCE: AN SSSR. Izvestiya.Seriya fizicheskaya, v.30, no.1, 1966 34-36

TOPIC TAGS: ferromagnetic film, magnetic thin film, cobalt, magnetic domain structure, magnetic anisotropy

ABSTRACT: Cobalt films were deposited at 10^{-4} mm Hg on NaCl crystal cleavage surfaces having temperatures from room temperature to 400°C, and their domain structures were observed by means of a transmission electron microscope. Conditions for obtaining single-crystal films are reported in another communication. Films deposited on substrates at 20°C contained hexagonal, cubic and amorphous phases and had a domain structure that was initially mottled and developed under the influence of an ac field into a structure of coarse domains with weakly developed substructure. The mottled domain structure is ascribed to the presence of nonmagnetic inclusions. Films deposited on substrates heated to 70 to 150°C did not show a mottled domain structure,

17409-66 EWT(m)/T/EWP(e)/EWP(t) IJP(c) JD/HW
ACC NR: AP6004466 SOURCE CODE: UR/0048/66/030/001/0050/0053

AUTHOR: Kirenskiy,L.V.; Sukhanova,R.V.; Pyn'ko, V.G.; Edel'man, I.S. 59 9

ORG: Physics Institute of the Siberian section of the SSSR Academy of Sciences (Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR); Krasnoyarsk State Pedagogical Institute (Krasnoyarsk gosudarstvennyy pedagogicheskiy institut)

TITLE: Single-crystal films of iron-nickel alloys (Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic Films held at Irkutsk 10 July to 15 July 1964)

SOURCE: AN SSSR. Izvestiya.Seriya fizicheskaya, v.30, no. 1, 1966, 50-53 and insert (facing page 45)

TOPIC TAGS: ferromagnetic film, magnetic thin film, permalloy, iron nickel alloy, single crystal, magnetic anisotropy, magnetic coercive force, magnetic domain structure

ABSTRACT: Single-crystal 800 Å films of Fe-Ni alloys (5 to 95% Ni) were obtained by vacuum evaporation at 10^{-3} to 10^{-4} mm Hg onto the heated (250 to 400C) surface of an NaCl crystal, although O.S.Heavens (Proc. Phys. Soc. 78, 33 (1961)) and A.Baltz (J. Appl. Phys., 32, 815 (1961)) found that high vacuum (10^{-9} mm Hg) and annealing was necessary to obtain single-crystal films. No reason for this discrepancy is suggested. The alloys containing less than 20% Ni crystallized in a body-centered lattice with a lattice constant of 2.828 Å and grew with the (001) face and (100) axis parallel to the (001) face and (110) axis, respectively, of the NaCl substrate; the alloys con-

L 39611-66 EWT(l)/EWP(e)/EWT(m)/T/EWP(t)/EWP(z)/EWP(b) LIP(c) JD/HW/GS-2

ACC NR: AP6004464 SOURCE CODE: UR/0048/66/030/001/0043/0045

AUTHOR: Pyn ko, V.G.; Sukhanova, R.V.

ORG: Institute of Physics, Siberian Section of the Academy of Sciences, SSSR (Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR); Krasnoyarsk State Pedagogical Institute (Krasnoyarskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Concerning epitaxial growth and structure of iron, nickel, and cobalt films (Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic Films held at Irkutsk 10 July to 15 July, 1964)

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no. 1, 1966, 43-45 and insert facing pp. 44 and 45

TOPIC TAGS: ferromagnetic film, magnetic thin film, iron, cobalt, nickel, sodium chloride, epitaxial growing, crystal orientation,

ABSTRACT: Iron, cobalt, and nickel films were vacuum evaporated onto freshly cleaved rock salt crystal surfaces and their structures were investigated by electron diffraction. The films were deposited in three different types of apparatus, referred to as A, B, and C. In apparatus A the pressure during deposition was 10^{-5} mm Hg. Apparatus B and C were commercial vacuum units (type UVR-2) in which the pressure was 10^{-4} mm Hg. The substrates were heated at 300-400°C for 20-30 min before deposition. The deposition rate was usually about 100 Å/sec. Iron films deposited in apparatus

the magnetization ripples was 1.25 micron, and the angular amplitude of the magnetization oscillations was 8.5°. With increasing substrate temperature during deposition, both crystallite size and the magnetization ripple wavelength increased, the latter reaching 2.5 micron at a substrate temperature of 200°. The films deposited on 100° substrates all showed fine magnetic structure and magnetization ripples. Even the film containing 76% Ni, whose crystal anisotropy should be zero, had ripples; this is ascribed to composition fluctuations giving rise to regions of local crystal anisotropy. The magnetization ripple wavelength in this series of films was strongly correlated with the coercive force, both passing through a minimum at the same composition (80% Ni). A single-crystal film (80% Ni) was also investigated. This film had biaxial magnetic anisotropy and also exhibited magnetization ripples with a wavelength of 1.35 micron. The magnetization ripples in the single-crystal film were found significantly to affect the process of quasistatic magnetization switching in it. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 007

to obtain in all three metals between the wavelength of the magnetization ripples and the linear dimensions of the crystallites, and between the magnetization ripple wavelength and the coercive force. The magnetization ripple wavelength increased with increasing grain size and with increasing coercive force. Both uniaxial and isotropic films were investigated, and both showed well developed magnetic fine structure. The authors, therefore, cannot agree with E.Fuchs (Z. angew. Phys., 14, 203 (1962)) and others who assert that magnetization ripples are due to superposition of uniaxial anisotropy onto crystal anisotropy; uniaxial anisotropy, rather, can only affect the amplitude of the magnetization vector oscillations. The effect of quasistatic magnetization switching on the magnetic fine structure was investigated. In general, the switching process begins with a change in the fine structure owing to rotation of the magnetization and reversal of the walls of the ripples, and ends with a sudden reorganization of the whole structure or with a shift of the walls that have been formed. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 007

SUKHANOVA, S.V.

All-Union Conference on the Unification of Methods and Equipment Used in the Study of Reservoir Properties of Rocks. Sov.geol. 5 no.11:131-134 N '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut.

(Oil sands)

SAMARINA, N.Ye.; MYACHKOVA, Ye.A.; SUKHANOVA, T.K.; VLADIMIROV, V.Ye., otv. red.

[Economy of Kurgan Province; statistical abstract] Narodnoe khoziaistvo Kurganskoi oblasti; statisticheskii sbornik. [n.p.] Gosstatizdat TsSU SSSR, Cheliabinskoe upr., 1963. 268 p. (MIRA 16:7)

1. Kurgan (Province) Oblastnoye statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Kurganskoy oblasti (for Vladimirov).

(Kurgan Province--Statistics)

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SUKHANOVA, V. A. (Ufa)

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1. Ufimskiy nauchno-issledovatel'skiy institut gigiyeny i profzabolevaniy.

(HEAT--PHYSIOLOGICAL EFFECT)
(STOMACH--SECRETIONS)

GELLER, L.I.; SUKHANOVA, V.A.

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1. Klinika (zav. L.I. Geller) Ufimskogo nauchno-issledovatel'skogo instituta gigiyeny i professional'nykh zabolevaniy (dir. G.M. Mukhametova).

BRAGINSKAYA, L.L.; SUKHANOVA, V.A.

Incorporation of S^{35}-labeled methionine into proteins of various parts of the gastrointestinal tract in rats under some pathological conditions. Vop. med. khim. 10 no.5:460-463 S-O '64. (MIRA 18:11)

1. Ufimskiy institut gigiyeny i professional'nykh zabolevaniy.

BRAGINSKAYA, L.L.; SUKHANOVA, V.A.

Incorporation of S35-labeled methionine into proteins of various parts of the gastrointestinal tract in rats under some pathological conditions. Vop. med. khim. 10 no.5:460-463 S-O '64. (MIRA 18:11)

1. Ufimskiy institut gigiyeny i professional'nykh zabolevaniy.

TOPCHIYEV, A.V., akademik, redaktor; TROFIMUK, A.A., redaktor; TREBIN, F.A., doktor tekhnicheskikh nauk, redaktor; FEDYNSKIY, V.V., doktor fiziko-matematicheskikh nauk, redaktor; SUKHANOVA, V.P., inzhener, redaktor; POSTNIKOV, V.G., redaktor; VOL'FSON, S.I., redaktor; BEKHMAN, Yu.K., vedushchiy redaktor; KOVALEVA, A.A., vedushchiy redaktor; PERSHINA, Ye.G., vedushchiy redaktór; SAVINA, Z.A., vedushchiy redaktor; USOVA, N.G., vedushchiy redaktor; ZAMARAYEVA, K.M., vedushchiy redaktor; NOVIKOVA, M.M., vedushchiy redaktor; L'VOVA, L.A., vedushchiy redaktor; YERSHOV, P.R., vedushchiy redaktor; POLOSINA, A.S., tekhnicheskiy redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor

[4th International Petroleum Congress] IV Mezhdunarodnyi neftianoi kongress. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry. Vol.1. [The geology of oil and gas deposits] Geologiia neftianykh i gazovykh mestorozhdenii. (Pod red. A.A.Trofimuka). 1956. 534 p. Vol.2. [Geophysical methods in prospecting] Geofizicheskie metody razvedki. (Pod red. V.V.Fedynskogo). 1956. 392 p. Vol.4. [The technology of oil and shale processing] Tekhnologiia pererabotki nefti i slantsev. 1956. 527 p. Vol.5. [Chemical processing of oil and gas] Khimicheskaia pererabotka nefti i gaza. 1956. 302 p. Vol.8. [Equipment, metals and protection from corrosion] Oborudovanie, metally i zashchita ot korrozii. 1956. 227 p. (MLRA 9:12)

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(Prospecting--Geophysical methods) (Petroleum--Refining)

BABUROV, A., student; GLADKOVA, N., studentka; GUTNOV, A., student; ZVEZDIN, A., student; LEZHAVA, I., student; SADOVSKIY, S., student; SUKHANOVA, Ye., studentka; KHARITONOVA, Z., studentka

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(Coal mines and mining)

RZHEVSKIY, V.V., prof.,dokt.tekhn.nauk; BUYANOV,Yu.D., kand.tekhn.nauk; VASIL'YEV, Ye.I., kand.tekhn.nauk; DEMIN, A.M., kand.tekhn.nauk; KULESHOV, N.A., kand.tekhn.nauk; MEN'SHOV, B.G., kand.tekhn.nauk; NEVSKIY, V.N., kand.tekhn.nauk; POTAPOV, M.G., kand.tekhn.nauk; RODIONOV, L.Ye., kand.tekhn.nauk; SIMKIN, B.A., kand.tekhn.nauk; SUKHANOVA, Ye.M., kand.tekhn.nauk; YUMATOV, B.P., kand.tekhn.nauk; KHOKHRYAKOV, V.S., kand.tekhn.nauk; ALEKSANDROV, N.N., gornyy inzh.; ARISTOV, I.I., inzh.; BUGOSLAVSKIY, Yu.K., gornyy inzh.; DIDKOVSKIY, D.Z., inzh.; ONOTSKIY, M.I., inzh.; STAKHEVICH, Ye.B., inzh.; GEYMAN, L.M., red.izd-va; MAKSIMOVA, V.V., tekhn. red.; KONDRAT'YEVA, M.A., tekhn. red.

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SUKHANOVA, Ye.N.

An instance of coke formation in coals in contact with a sulfide vein. Geol.rud.mestorozh. no.6:85-89 N-D '59. (MIRA 13:7)

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(Coke) (Sulfides)

SHOGAM, S.M.; TOMICHEVA, M.V.; LEZINA, T.A.; SUKHANOVA, Ye.N.; KOROBOVA, I.V.; MAKHNEV, Yu.A.

Introducing the kinetic method of determining gamma-isomers of hexachlorocyclohexane in dusts of hexachlorocyclohexane. [Trudy] NIUIF no.165:52-62 '59. (MIRA 13:8)

1. Predpriyatiye khimicheskoy promyshlennosti.
(Cyclohexane)

YEGOROV, V.N.; SUKHANOVA, Ye.N.

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1. Noril'skaya kompleksnaya geologorazvedochnaya ekspeditsiya.
(Noril'sk region--Copper ores) (Noril'sk region--Nickel ores)

SUKHANOVA, Ye.N.

Some factors determining the ore potential of Noril'sk-type intrusives having significance in prospecting for copper-nickel ores. Geol.rud.mestorozh. 5 no.1:75-83 Ja-F '63. (MIRA 16:3)

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Structural features of uniform sulfide deposits in a copper-nickel deposit. Razved. i okh. nedr. 30 no.4:5-7 Ap '64. (MIRA 17:12)

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SUKHANOVA, Ya.

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IVIKHOV, Georgiy Sergeyevich, prof.; MAKARENKOV, Mikhail Anan'yevich; SUKHANOVA, Yekaterina Yur'yevna, kand. tekhn. nauk; SPERANSKIY, V.G., prof., red.; MAKSIMOVICH, A.G., red.; SUDAK, D.M., tekhn. red.

[Food products] Tovarovedenie prodovol'stvennykh tovarov. Pod red. V.G. Speranskogo. Moskva, Gos. izd-vo torg. lit-ry. Vol.2. [Dairy, meat, and fish products] Molochnye, miasnye i rybnye tovary. 1958. 314 p. (MIRA 11:10)

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INIKHOV, G.S., prof.; GABRIEL'YANTS, M.A., dots.; MAKAREYEV, M.A.; SUKHANOVA, Ye.Yu., kand. tekhn. nauk; GRANOVSKAYA, I.E., red.; EL'KINA, E.M., tekhn. red.

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DANILOV, Matvey Maksimovich; SUKHANOVA, Ye.Yu., kand. tekhn. nauk, retsenzent; AZAROV, V.N., st. prepod., retsenzent; LAZAREV,Ye.N., dots., retsenzent; AYRIYEVA, N.S., red.; VOLKOVA, V.G., tekhn. red.

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Experience in the organization of production line operations. Shvein.prom. no.1:25-27 Ja-F '61. (MIRA 14:3)
(Assembly-line methods) (Gomel'--Clothing industry)

BOBROVNIK, Viktor L'vovich; SUKHANOVA, Z.Ya., red.

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(Khakass Autonomous Province--Lumbering)

PILIPENKO, M.S.; ZAMYATIN, S.R.; UZBERG, V.P.; MOROKOV, P.K.; SUKHANOVA, Z.V.; DEMENEVA, A.P.

Production and use of ladle brick. Ogneupory 29 no.12:529-534 '64. (MIRA 18:1)

1. Kuznetskiy metallurgicheskiy kombinat.

AUTHOR: Zolotov, Yu. A., Altmarin, I. A., Sudhanovskaya, V. I.

TITLE: Extraction of trivalent thallium from chloride solutions

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 2, 1965, 165-171

TOPIC TAGS: thallium extraction, thallium determination, ether, amyl acetate, ultraviolet absorption, chloride solution

ABSTRACT: The authors studied the extraction of thallium (III) from hydrochloric acid solutions and lithium chloride solutions with ethers (diethyl, diisopropyl, dibutyl ether) and amyl acetate. The extraction was studied as a function of the HCl concentration or hydrogen ion concentration at a constant ionic strength and constant chloride ion concentration, and also as a function of the thallium concentration. The organic phases were analyzed for the main components, and the absorption spectra of aqueous chloride solutions and extracts were recorded in the ultraviolet. The data obtained indicate that in all cases thallium was extracted only in the form of the complex acid $HTlCl_4$, since the [illegible] and of the nature of [illegible] other from solutions with very [illegible]

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thallium to the extent of 98-99% even in 0.3-0.8 NHCl. Orig. art. has: 5 figures and 3 tables.

[illegible] Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR, Moscow

[redacted], A. [redacted], [redacted]

extraction of [redacted] from chloride solutions. Zhur. neorg. khim. [redacted] Mr '65. (MIRA 18:7)

1. Institut [redacted] Moskovskoy khimii imeni V.I. Vernadskogo [redacted].

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1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR i Volgogradskiy politekhnicheskiy institut. Submitted May 5, 1964.

BOSYY, M.K.; KOVTUN, A.P., student; KOLYADENKO, G.I., student; SUKHANOVSKAYA, O.N., studentka

Studies on the duration of inhibitory aferpotentials during extinction of conditioned reflexes. Vopr.fiziol. no.9:19-28 '54. (MIRA 14:1)

1. Cherkasskiy pedagogicheskiy institut.
(REFLEX, CONDITION,
inhib. afterpotential, duration during extinction)

CHERNOUDOV, Nikolay Nikolayevich; SUKHANOVSKIY, Aleksey Il'ich; GRIGOR'YEV, P.I., red.; MOROZOV, Yu.V., red. izd-va; SHITS, V.P., tekhn. red.

[Principal problems in planning production costs of the lumber industry in economic councils] Osnovnye voprosy praktiki planirovaniia sebestoimosti produktsii lesnoi promyshlennosti v sovnarkhozakh. Moskva, Goslesbumizdat, 1958. 59 p. (MIRA 11:9)
(Lumbering--Cost)

SHCHEDRIN, Boris Yefimovich; SUKHANOVSKIY, A.I.

[Principles of planningin the lumbering industry and ways of improving it] Osnovy planirovaniia v lesozagotovitel'noi promyshlennosti i puti ego uluchsheniia. Moskva, Goslesbumizdat, 1959. 66 p. (MIRA 14:10)

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CHERNOUDOV, Nikolay Nikolayevich; SUKHANOVSKIY, Aleksey Il'ich; GRIGOR'IEV, P.I., retsenzent; POPOV, V.A., red.; GORYUNOVA, L.K., red.izd-va; BRATISHKO, L.V., tekhn.red.

[Planning the unit cost in logging, floating, and timber transshipment] Planirovanie sebestoimosti produktsii lesoeksploatatsii i stoimosti splavnykh i lesoperevalochnykh rabot. Moskva, Goslesbumizdat, 1959. 260 p. (MIRA 13:11)
(Lumbering--Costs)

SHCHEDRIN, Boris Yefimovich; SUKHANOVSKIY, Aleksey Il'ich; GOZHEV, Aleksandr Alekseyevich; SHELEKHOV, V.M., red.; SHAKHOVA, L.I., red.izd-va; BACHURINA, A.M., tekhn.red.

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(Lumbering)

SPRINTSYN, M.N.; AMALITSKIY, V.M.[deceased]; DENIS'YEV, V.I.; ZHUKOV, A.M.; LIKHOVIDOV, N.K.; SHCHEDRIN, B.Ye.; KAFTANOVSKIY, G.M.; SUKHANOVSKIY, A.I.; TSVETKOV, V.A.[deceased]; MITEL'MAN, Ye.L.; KALASHNIKOV, P.L.; ANDREYEV, I.I., retsenzent; SALTYKOV, M.I., otv. red.; SLUTSKER, M.Z., red. izd-va; GRECHISHCHEVA, V.I., tekhn. red.

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(Lumbering--Handbooks, manuals, etc.)

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9,9100

AUTHORS: Kokurin, Yu.L., Sukhanovskiy, A.N., and Alekseyev, Yu. I.

TITLE: Investigating of models of large-scale inhomogeneities in the ionosphere using the radioastronomical method

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 5, 1961, 738 - 746

TEXT: It has already been shown by V.V. Vitkevich, and Yu.L. Kokurin (Ref. 1: Radiotekhnika i elektronika 1957, 2, 7, 826) that the oscillations of the refraction of radiowaves propagated through the whole thickness of the ionosphere are conditioned by the presence in the ionosphere of inhomogeneities with horizontal dimensions of the order of hundreds of kilometers. Again Yu.L. Kokurin (Ref. 2: Radiotekhnika i elektronika 1959, 4, 12, 1985) approximated the evaluation of the dependence of the mean amplitude of oscillations of refraction $\overline{(R_n)}_{max}$ on the vertex angle z, , and it was

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tangent was taken as the amplitude of the oscillation of refraction $(R_n^v)_{max}$. Angular dimensions were then transposed into the linear dimension d under the assumption that the distribution of the inhomogeneity was at a height h_0 = 300 km (Ref. 1: Op.cit.). The value of d oscillation between 100 - 500 km with its most probable value $\overline{d} \simeq 200 - 220$ km. The amplitudes of oscillations of refraction $(R_n^v)_{max}$, averaged over every session of observation, lie basically within the limits 0.5 - 5.0' with the most probable value $\overline{(R_n^v)_{max}}$ = 2.5 - 3.0'. From the above data the parameters of the two models of inhomogeneities were evaluated as follows: Model 1. Assuming the linear dimensions $\overline{d} \simeq 200$ km its effective thickness $\mathcal{L}$ = 50 km and the refractive index n = 0.9983 ($N = 1.8 \cdot 10^6$ cm^{-3}) the difference between the geometrical and optical thickness of the inhomogeneity is L ≃ 80 m. From Equation (6) obtained by Yu.L. Kokurin (Ref. 2: Radiotekhnika i elektronika, 1959, 4, 12, 1985) the variations of

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this difference

$$L = \overline{(R_n^V)_{max}}\, d\, \frac{\overline{\left(1-\frac{r_0}{r_0+h_0}\sin z\right)^2}}{2\pi} = 2{,}7-3{,}5\ \text{km} \qquad (1)$$

(radius of earth - r_0) from which $\frac{\Delta L}{L}$ = 3.3 - 4.4 %; thus if the irregularities in the refraction are due to the presence in the F layer of horizontal gradients, the horizontal changes (with an average period ~200 km) of the optical thickness of large inhomogeneities and of the total number of electrons in them are 3.3 - 4.4 %.

Model 2. For the same parameters of inhomogeneities for the wave model the following is obtained using Equation (10) from Yu.L. Kokurin (Ref. 2: Op.cit.).

$$\overline{\Delta h} = \frac{\overline{(R_n^V)_{max}}\, d^2 \left[1-\left(\frac{r_0}{r_0+h_0}\sin z\right)^2\right]^{3/2}}{L(2\pi)^3 \frac{r_0}{r_0+h_0}\sin z} = 0{,}45-0{,}54\ \text{km} \qquad (2)$$

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It follows that the observed oscillations in the refraction may be attributed to the wave structure of the ionosphere inhomogeneities with a period $\bar{d}$ = 200 km and amplitude of the wave $\Delta h \simeq 0.5$ km. The observations of the irregular refraction near the vertex were carried out in the Crimea (44°N) using a horizontal interferometer consisting of two parabolic antennas spaced in an East-West direction by about D = 520 m; the effective beam width was about 15°. In order to determine the curves of the dependence of the irregular refraction R_n on time, the position of the antenna lobes were determined in time units with the origin as the instant of culmination of the source. Observations were made between December 12, 1958 and June 1, 1959 with four cosmic sources. Graphs are given for every session of observations for $R_n = f(\tau)$. The authors conclude that large-scale ionosphere inhomogeneities represent wave type formations (Model II) with an average horizontal scale (period) $\bar{d} \simeq 200$ km and the amplitude of the wave $\Delta h \geqslant 0.5$ km. Only an insignificant thickness of the layer seems to have a wave structure. This thickness is $\ll 20\%$ of its total effective value. It would

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KOKURIN, Yu.L.; KOVURA, Yu.A.; SUKHANOVSKIY, A.N.

Method for measuring the north-south component of the refraction of microwaves in the ionosphere and the optical strata gradient. Radiotekh. i elektron. 10 no.5:939-940 My '65. (MIRA 18:5)

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ACC NR: AP6010439 SOURCE CODE: UR/0386/66/003/005/0219/0223

AUTHOR: Kokurin, Yu. L.; Kurbasov, V. V.; Lobanov, V. F.; Mozhzherin, V. M.; Sukhanovskiy, A. N.; Chernykh, N. S.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskiy Institut Akademii nauk SSSR)

TITLE: Measuring the distance to the moon by an optical method

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 5, 1966, 219-223

TOPIC TAGS: moon, moon earth distance, distance measurement, moon location, optical location, laser application

ABSTRACT: A description is given of the experimental measurement of the distance to the moon by means of an optical locator. A schematic of the locator is shown in Fig. 1. Ruby laser 1 and photomultiplier 2 are fixed rigidly in the Kude focus of telescope 3. A tunable interference filter 4 is placed in front of the photomultiplier and behind diaphragm 5. Mirror 6 can be automatically switched from receiving to transmitting operations. Photomultiplier output amplifier and pulse shaper 7 follow 2, and the measurement of the time intervals between the emission and reflection (from the moon) of laser pulses is made by

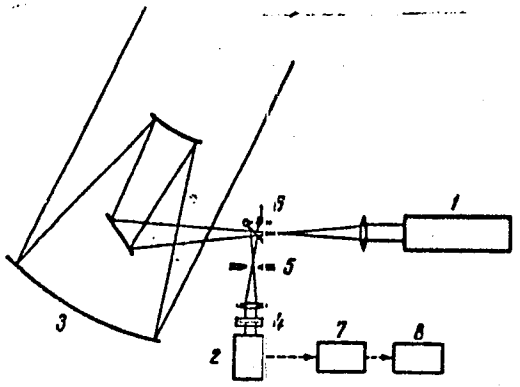

Fig. 1. Schematic of the locator

counter 8, which is activated by that portion of the laser pulse directed to the photomultiplier. The laser operated at 6943 Å, with a pulse energy and duration of 5—7 j and $5 \cdot 10^{-8}$ sec, respectively. The diameter of the main telescope mirror was 2.6 m and its focal length 104 m; the beam diameter was 13 mm, and the divergence of the beam reflected from the telescope mirror was ≈3 sec of arc. The filter pass-band was 10 Å, and the instrumental error in the measurement of time $\pm 10^{-7}$ sec. The observation of the lunar surface was confined to an area located at the bottom of the Flammarion crater with the selenographic

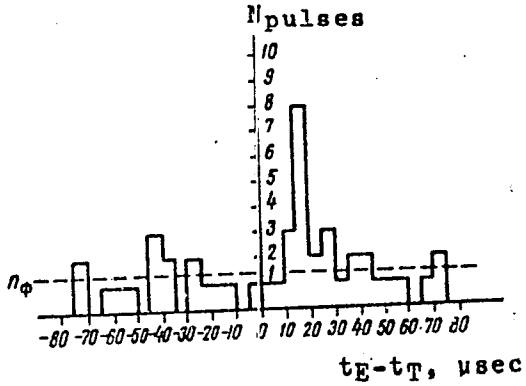

Fig. 2. Results of measurements

coordinates of λ—3°.57 and ϕ—2°.98. The results of observations are shown in Fig. 2, as a frequency distribution of the quantity $t_E - t_T$ in 10-μsec class intervals (t_E and t_T are the experimental and calculated times, respectively, required by a signal to complete the round trip). The signal-to-noise ratio was ~5 and the mean of the useful signal was found to be distributed within the 15—20 μsec class boundary, with a standard deviation of 1.2×10^{-6} sec. The total error in positioning the distribution center was $\simeq 1.3 \times 10^{-6}$ sec, which corre-

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sponds to ~200 m error in the measurement of distance. Orig. art. has: 2 figures. [YK]

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ACC NR: AP6019595 SOURCE CODE: UR/0293/66/004/003/0414/0426

AUTHOR: Kokurin, Yu. L.; Kurbasov, V. V.; Lobanov, V. F.; Mozhzherin, V. M.; Sukhanovskiy, A. N.; Chernykh, N. S.
ORG: none

TITLE: On the feasibility of measuring lunar disk and orbital parameters by optical radar

SOURCE: Kosmicheskiye issledovaniye, v. 4, no. 3, 1966, 414-426
TOPIC TAGS: lunar albedo, moon, laser application

ABSTRACT:

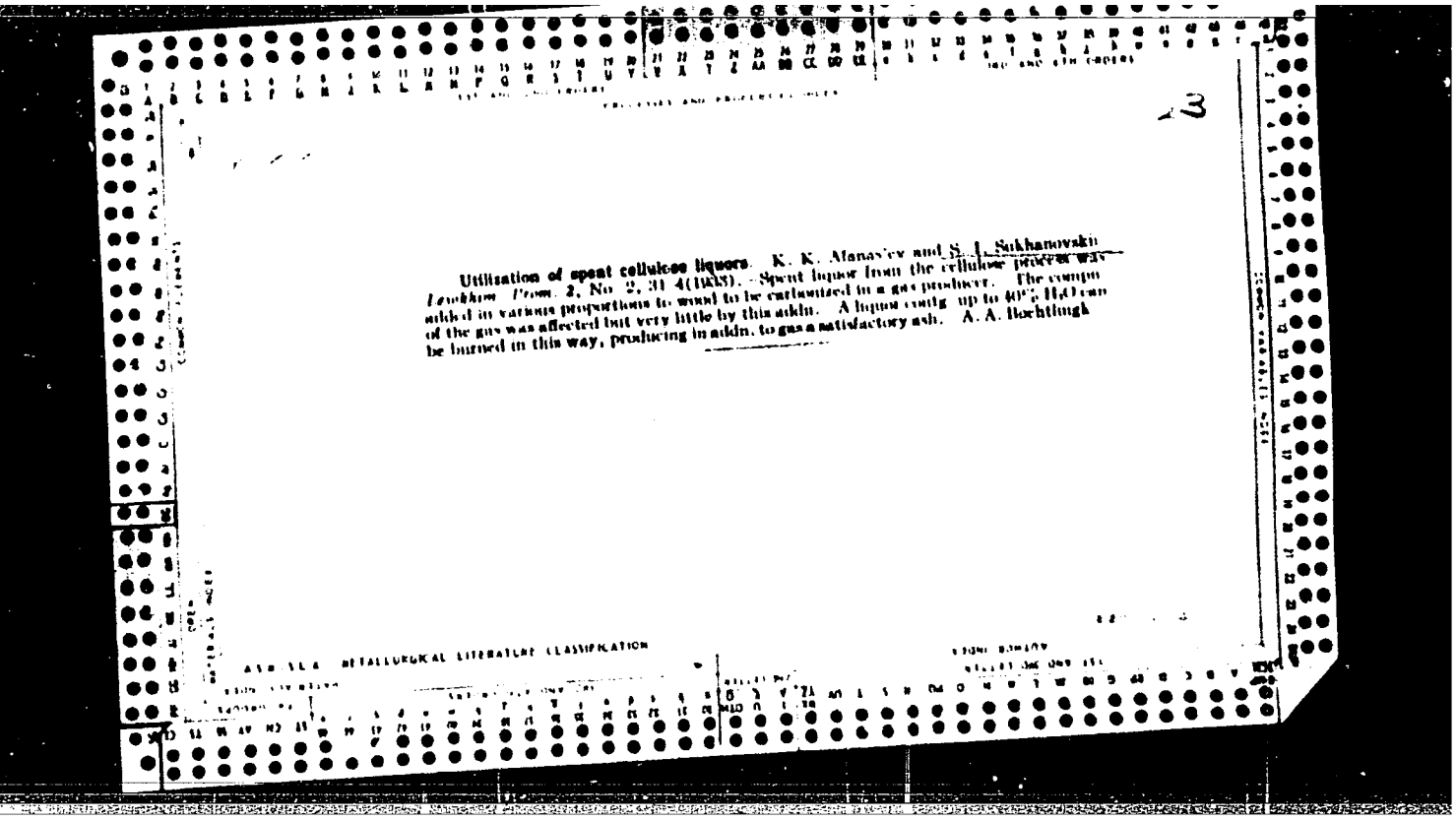
Yu. L. Kokurin and coworkers [1] have reviewed the theoretical problems in laser ranging of the moon, with the object of determining more accurate values for several Earth-Moon parameters. The authors discuss methods for 1) obtaining a more detectible reflection signal and 2) using the measured range to compute such parameters as mean lunar orbital radius, lunar disk radius, parallax constant, and Earth equatorial radius.

The basic range equation for a reflected electromagnetic signal is taken as a starting point. The factors are the same as in the radar range equation, except that the return signal varies inversely as the square, rather than as the fourth power, of range, since it is assumed that all the generated laser flux is incident on the Moon. Using an average figure for atmospheric absorption, a lunar albedo of 0.1, and an effective telescope area of 5.3 m^2 (actual area of a telescope currently in use), the authors calculate

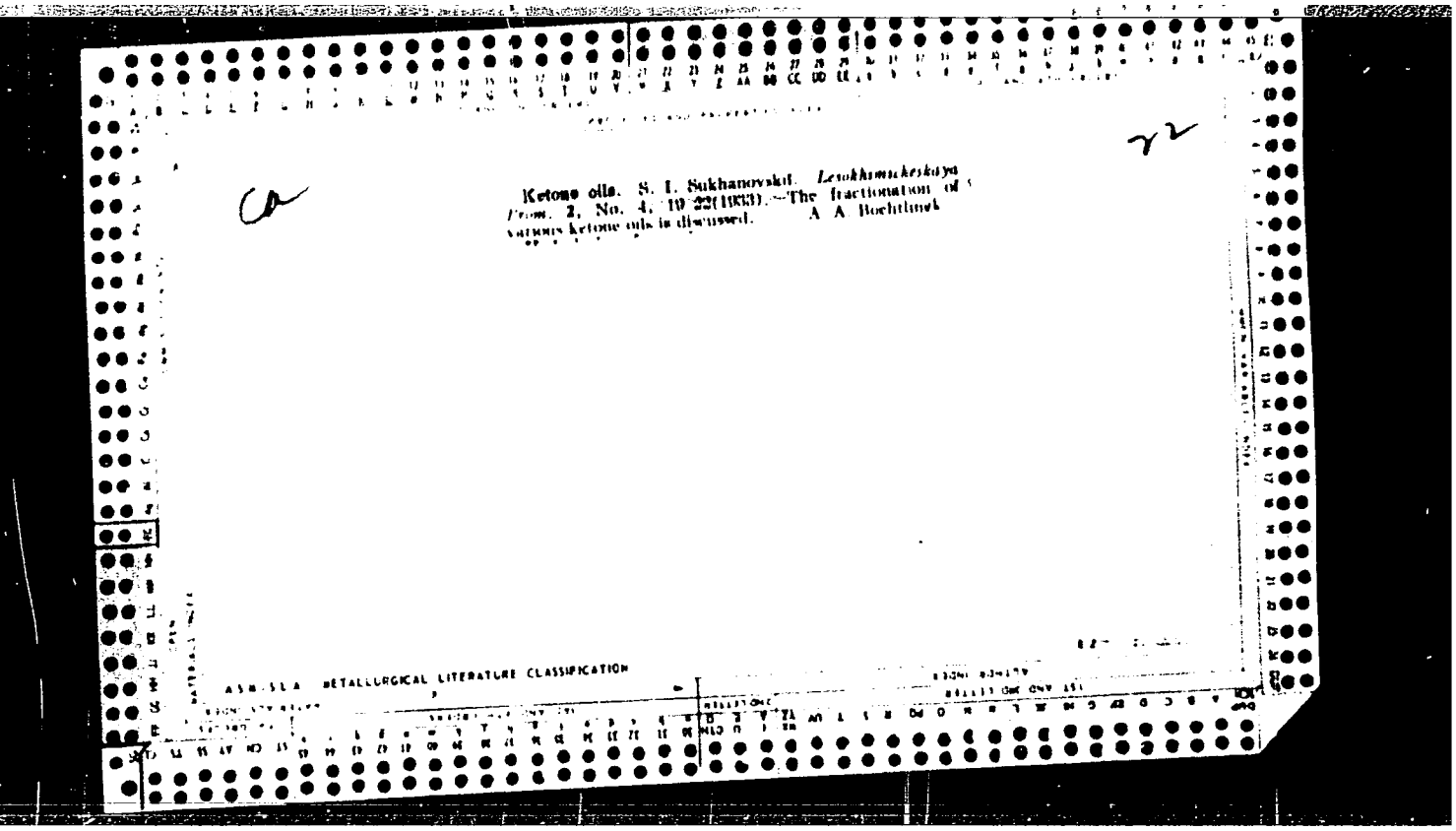
UDC: 523.31.082.5 + 521.61.082.5

the distance of the target area from the center of the lunar disk. An obvious way to improve the technique would be to place some form of mirror on the Moon; the authors propose an optical corner reflector for this purpose (see Fig. 1) and have analyzed ways of optimizing its design. With the density of the reflector material assumed to be the limiting factor, it is shown that one large reflector is more effective than several small ones. For a glass corner reflector, the gain β in return signal over that from the lunar surface alone (assuming a ruby laser) is calculated to be $\beta = 2.15 \times 10^{-3} a^4$, where a is the length of a joint edge in cm (see Fig. 1). Assuming a glass density of 2.7 g/cc, the authors find values of gain ranging from $\beta = 25$ for $a = 10.4$ cm up to $\beta = 1330$ for $a = 28.2$ cm. Some loss in reflectivity must be anticipated, such as by dust contamination, so the foregoing figures are based on a reflection coefficient of only 0.5.

Fig. 1. Corner reflector (Hexagon indicates effective reflective area)

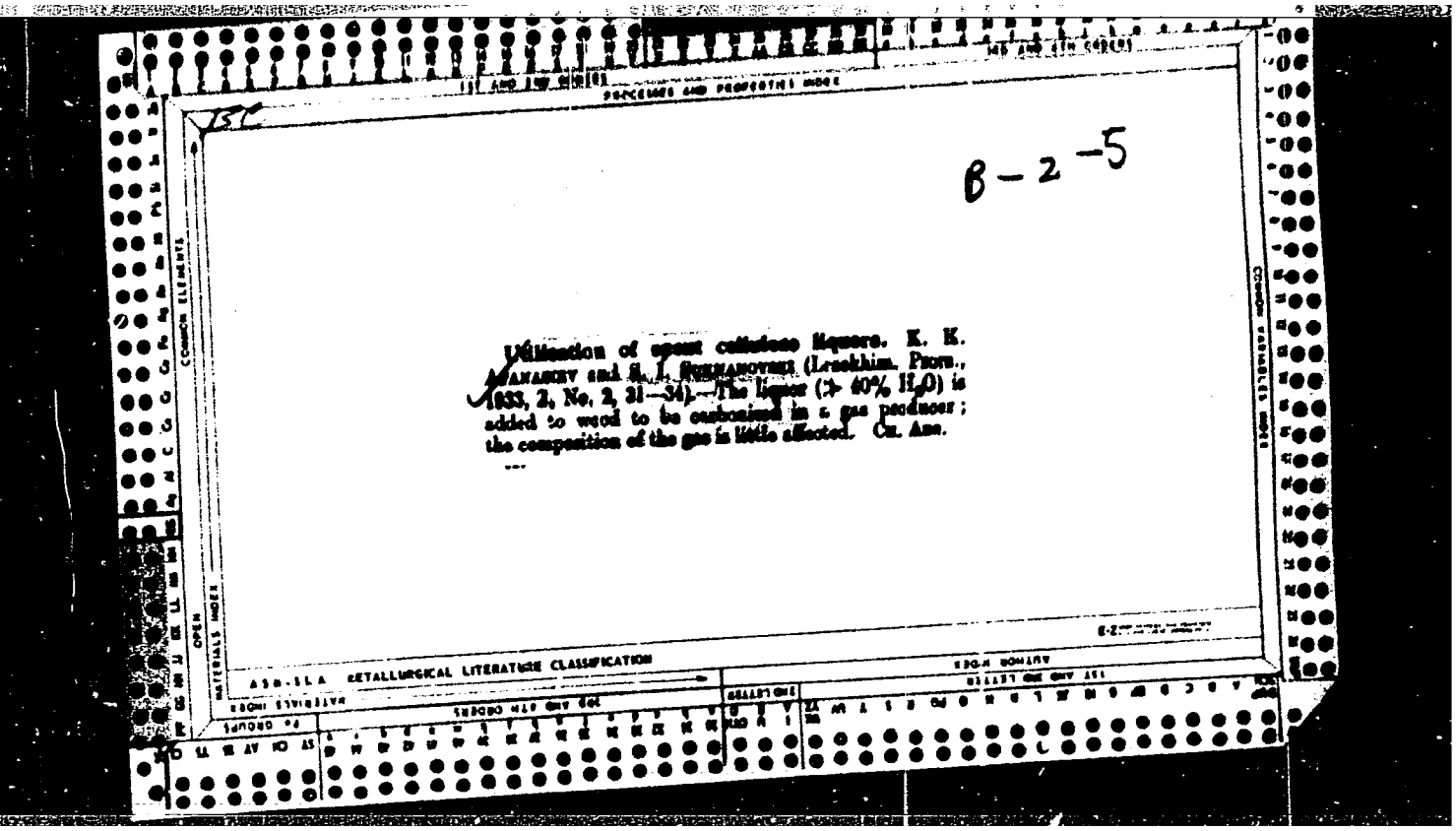


Utilization of spent cellulose liquors. K. K. Afanas'ev and S. I. Sukhanovskii. *Leukhim. Prom.* 2, No. 2, 31-4(1933).—Spent liquor from the cellulose process was added in various proportions to wood to be carbonized in a gas producer. The composition of the gas was affected but very little by this addn. A liquor containing up to 40% H_2O can be burned in this way, producing in addn. to gas a satisfactory ash. A. A. Bochtlingk



Ketone oils. S. I. Sukhanovskii. *Leokhimicheskaya Prom.* 2, No. 4, 19-22(1933).—The fractionation of various ketone oils is discussed. A. A. Boehtlingk

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION



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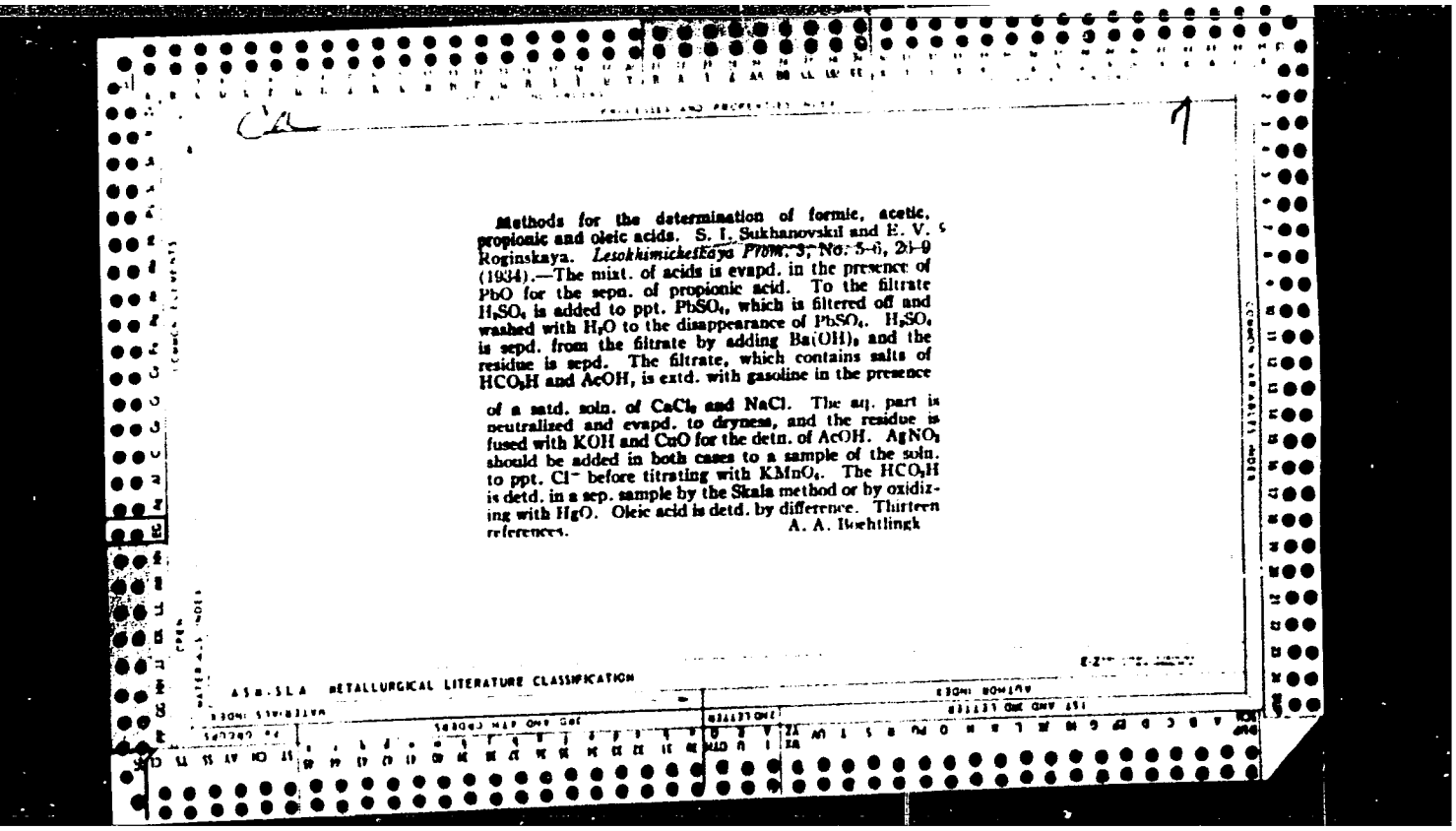
Utilisation of spent cellulose liquors. K. K. MANAKHOV and S. I. SHERMANOVSKII (Lesokhim. Prom., 1933, 2, No. 2, 31—34).—The liquor (> 40% H_2O) is added to wood to be carbonised in a gas producer; the composition of the gas is little affected. Ch. Abs.



Methods for the determination of formic, acetic, propionic and oleic acids. S. I. Sukhanovskii and E. V. Roginskaya. *Lesokhimicheskaya Prom.*, 3, No. 5-6, 21-9 (1934).—The mixt. of acids is evapd. in the presence of PbO for the sepn. of propionic acid. To the filtrate H_2SO_4 is added to ppt. $PbSO_4$, which is filtered off and washed with H_2O to the disappearance of $PbSO_4$. H_2SO_4 is sepd. from the filtrate by adding $Ba(OH)_2$ and the residue is sepd. The filtrate, which contains salts of HCO_2H and AcOH, is extd. with gasoline in the presence of a satd. soln. of $CaCl_2$ and NaCl. The aq. part is neutralized and evapd. to dryness, and the residue is fused with KOH and CuO for the detn. of AcOH. $AgNO_3$ should be added in both cases to a sample of the soln. to ppt. Cl^- before titrating with $KMnO_4$. The HCO_2H is detd. in a sep. sample by the Skala method or by oxidizing with HgO. Oleic acid is detd. by difference. Thirteen references.

A. A. Boehtlingk

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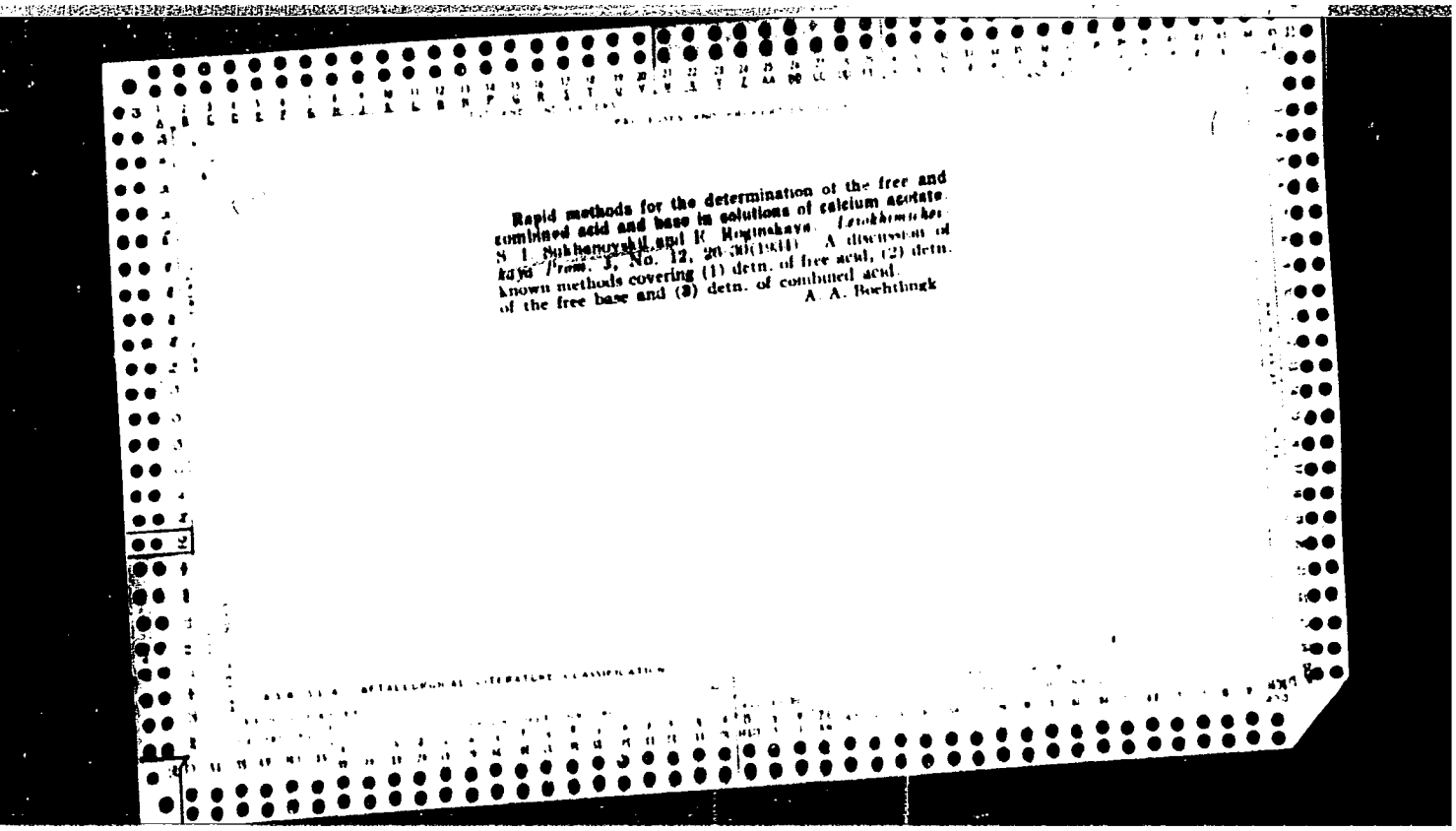
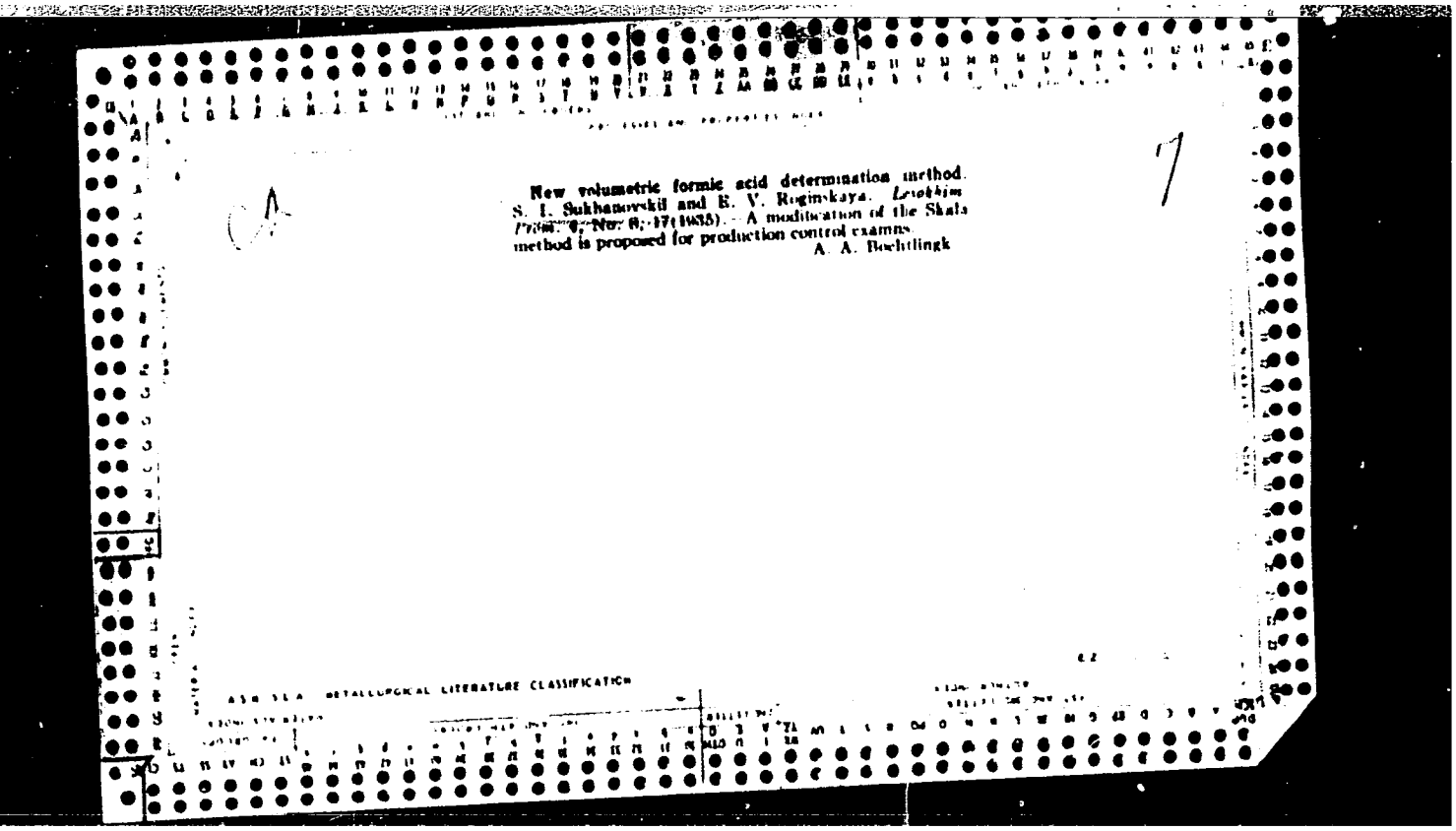


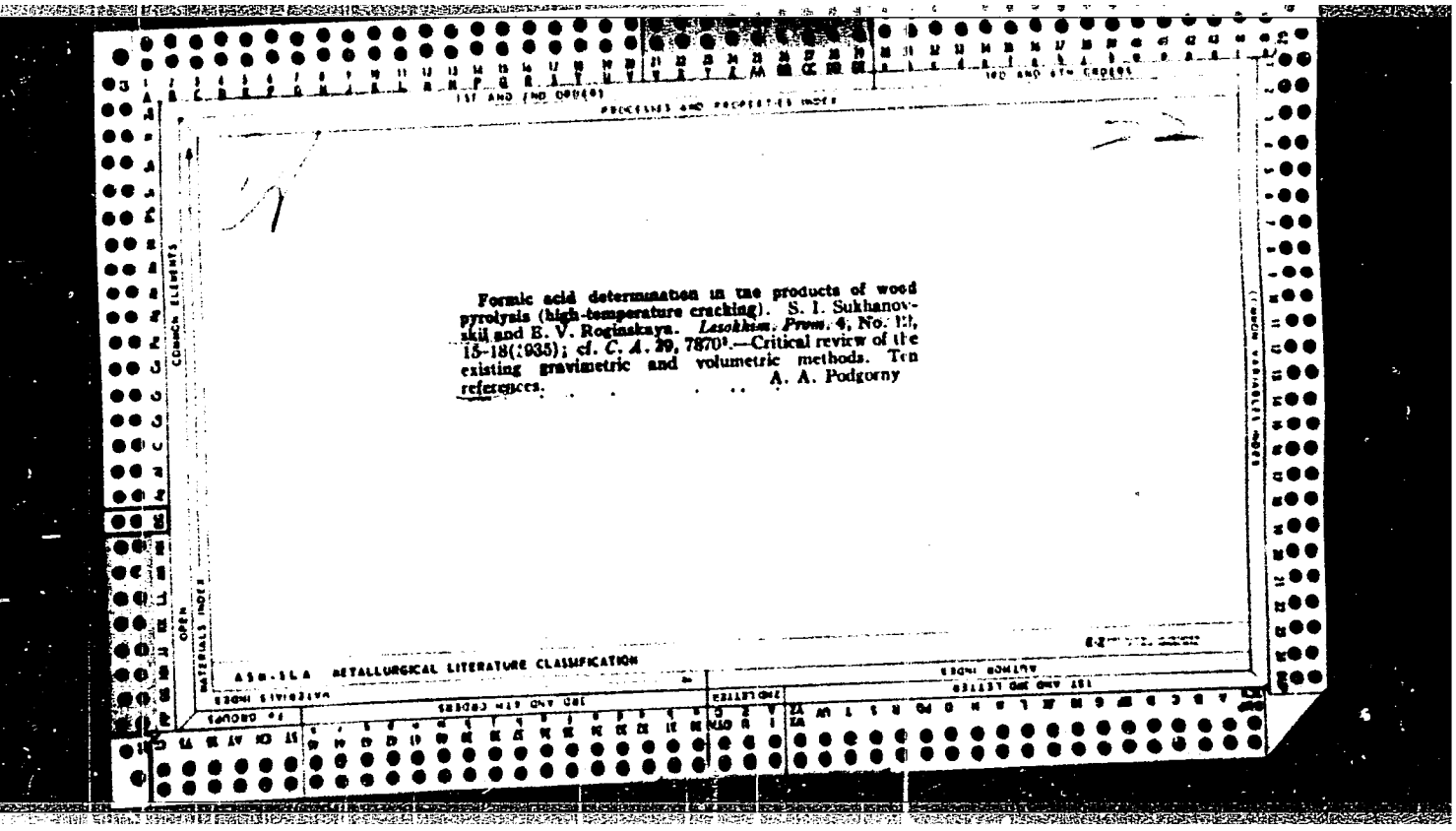
Rapid methods for the determination of the free and combined acid and base in solutions of calcium acetate. S. I. Sukhanuvskii and K. Ruginskaya. *Zavodskaya Lab.* [illegible] A discussion of known methods covering (1) detn. of free acid, (2) detn. of the free base and (3) detn. of combined acid.

A. A. Boehringk

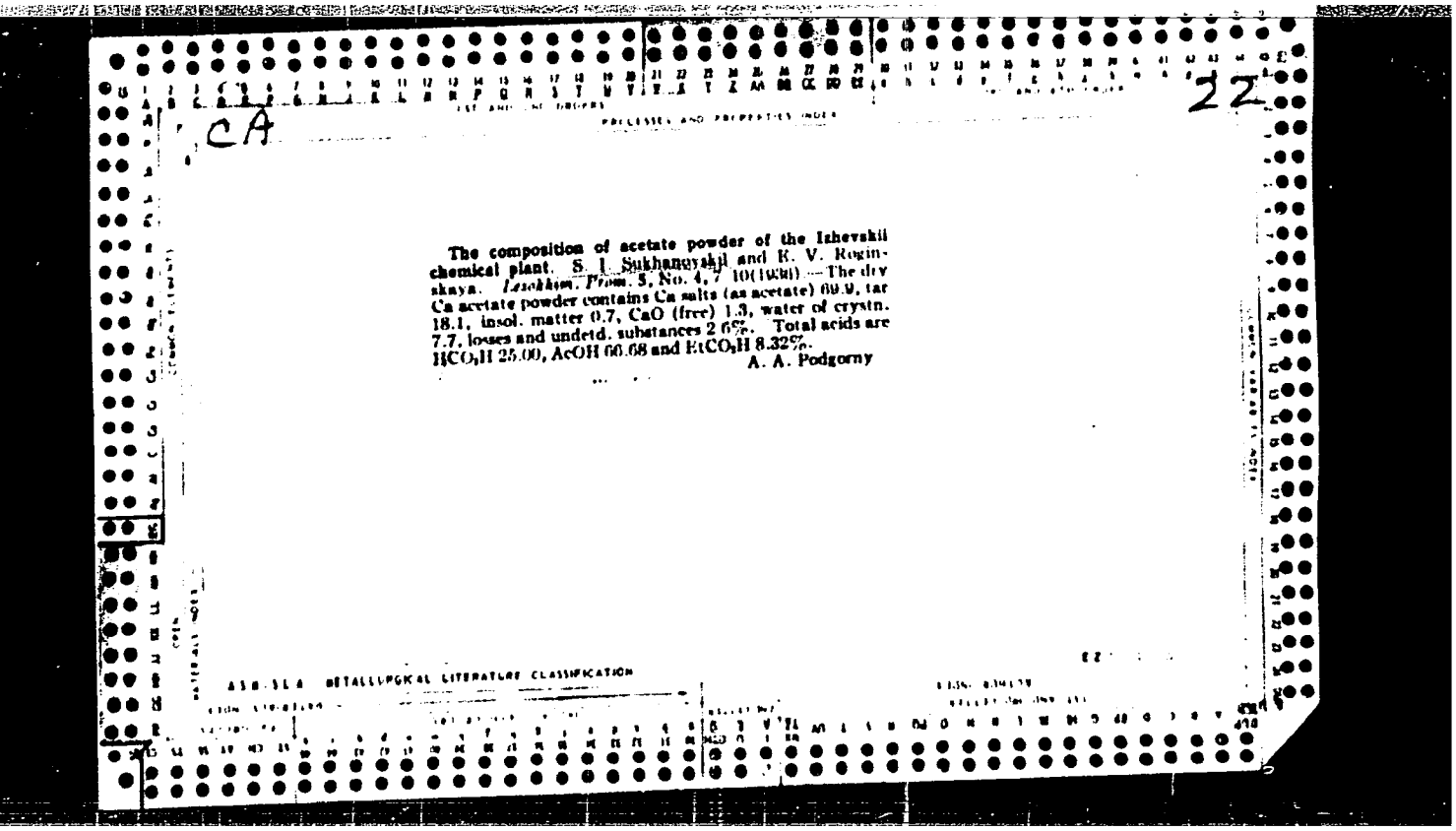


New volumetric formic acid determination method. S. I. Sukhanovskii and E. V. Reginskaya. *Zavodskaya* [illegible]. No. 6, 17(1938). — A modification of the Shala method is proposed for production control examns.
A. A. Bochtlingk

ASM 31.4 METALLURGICAL LITERATURE CLASSIFICATION



Formic acid determination in the products of wood pyrolysis (high-temperature cracking). S. I. Sukhanovskii and E. V. Roginskaya. *Lesokhim. Prom.* 4, No. 11, 15-18(1935); cf. *C. A.* 29, 7870[1].—Critical review of the existing gravimetric and volumetric methods. Ten references. A. A. Podgorny



CA

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The composition of acetate powder of the Izhevskii chemical plant. S. I. Sukhanovskii and R. V. Roginskaya. *Izvestiya. Prom.* 5, No. 4, 7–10(1941).—The dry Ca acetate powder contains Ca salts (as acetate) 69.9, tar 18.1, insol. matter 0.7, CaO (free) 1.3, water of crystn. 7.7, losses and undetd. substances 2.6%. Total acids are HCO_2H 25.00, AcOH 66.68 and $EtCO_2H$ 8.32%.

A. A. Podgorny

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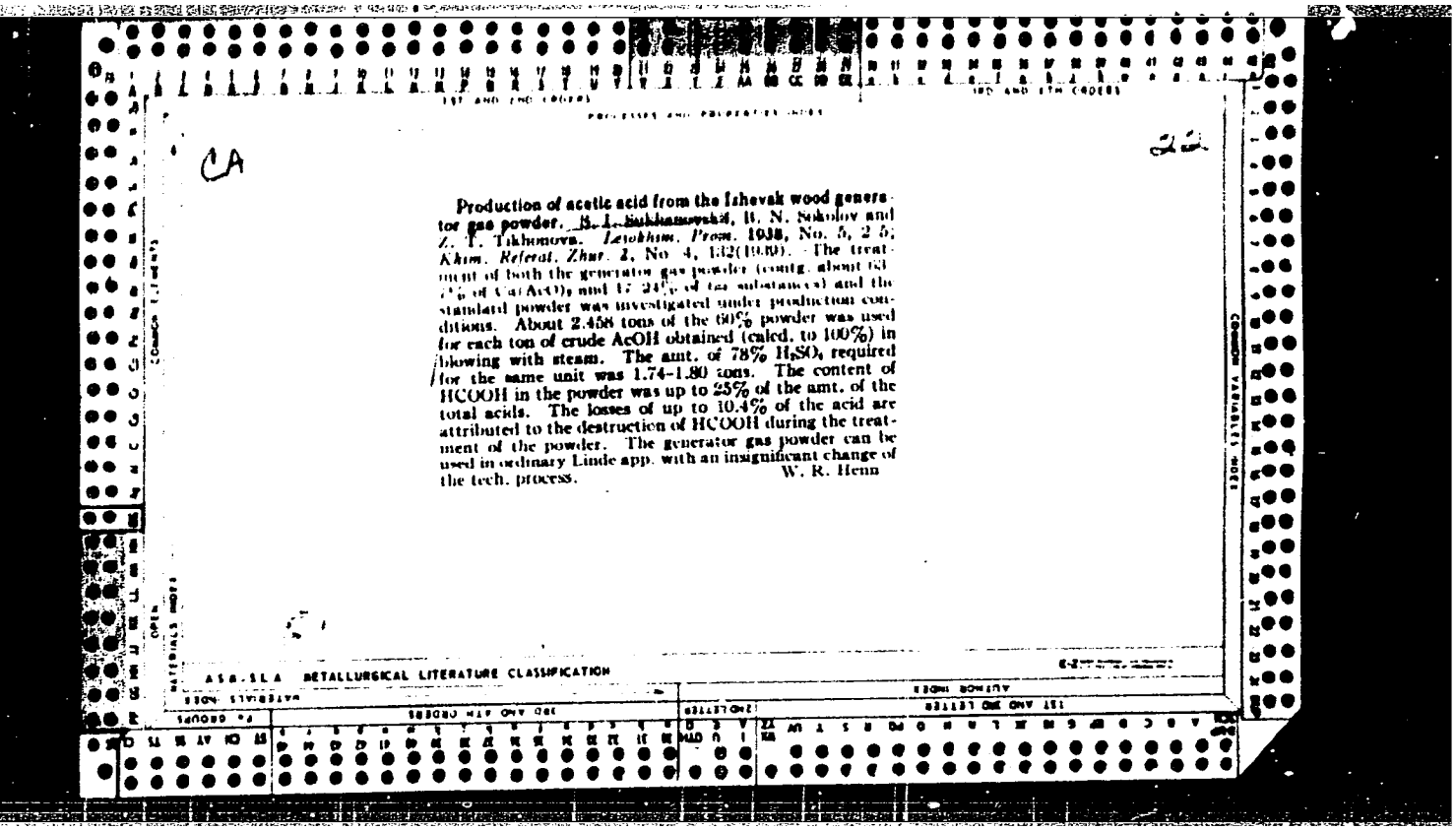

CA

Production of acetic acid from the Izhevsk wood generator gas powder. S. I. Subbotovskii, B. N. Sokolov and Z. T. Tikhonova. *Tsvetkhim. Prom.* 1938, No. 5, 2-5; *Khim. Referat. Zhur.* 1, No. 4, 132(1939). The treatment of both the generator gas powder (contg. about 65% of $Ca(AcO)_2$ and 17-24% of tar substances) and the standard powder was investigated under production conditions. About 2.458 tons of the 60% powder was used for each ton of crude AcOH obtained (calcd. to 100%) in blowing with steam. The amt. of 78% H_2SO_4 required for the same unit was 1.74-1.80 tons. The content of HCOOH in the powder was up to 25% of the amt. of the total acids. The losses of up to 10.4% of the acid are attributed to the destruction of HCOOH during the treatment of the powder. The generator gas powder can be used in ordinary Linde app. with an insignificant change of the tech. process.

W. R. Henn

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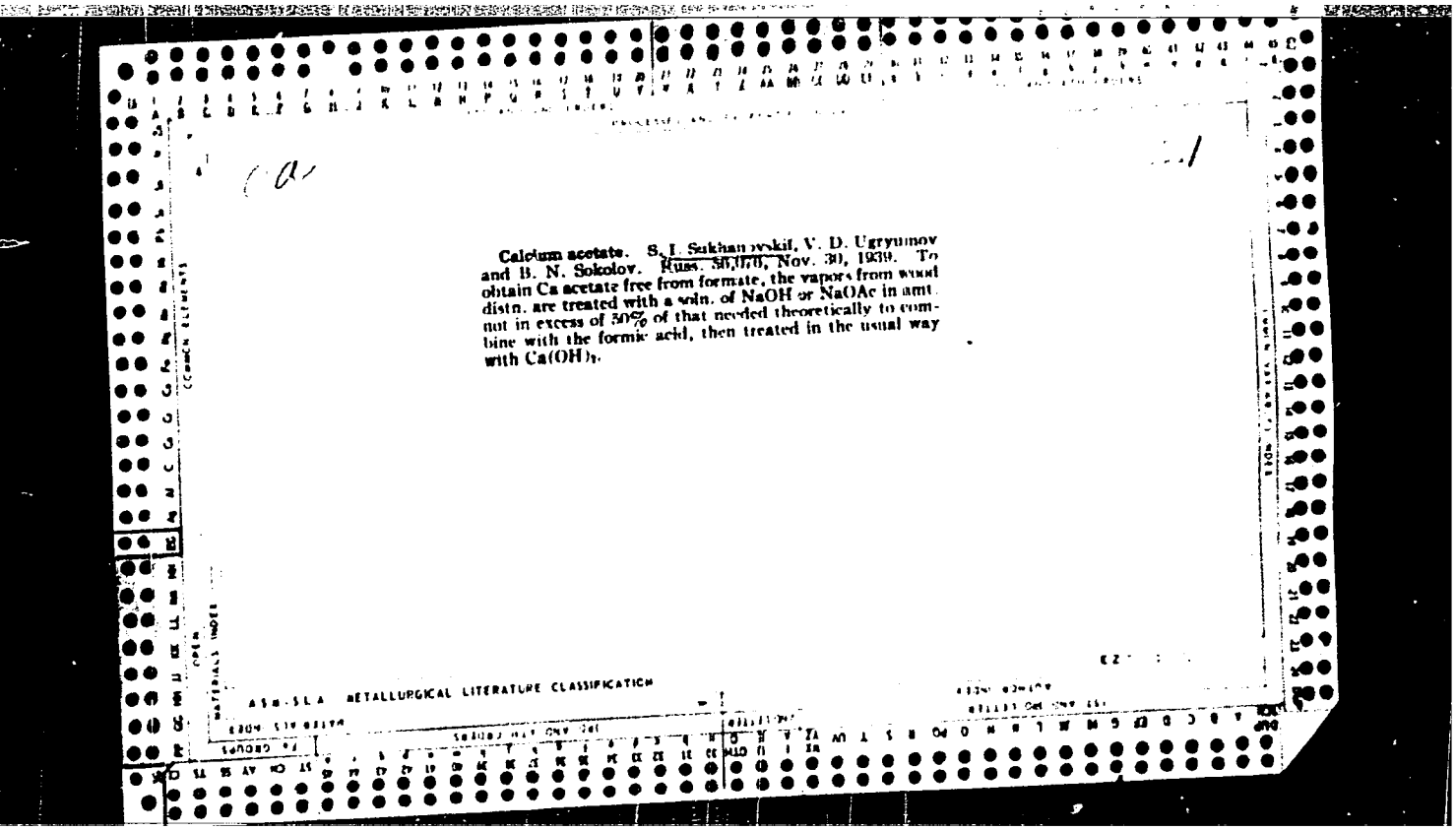
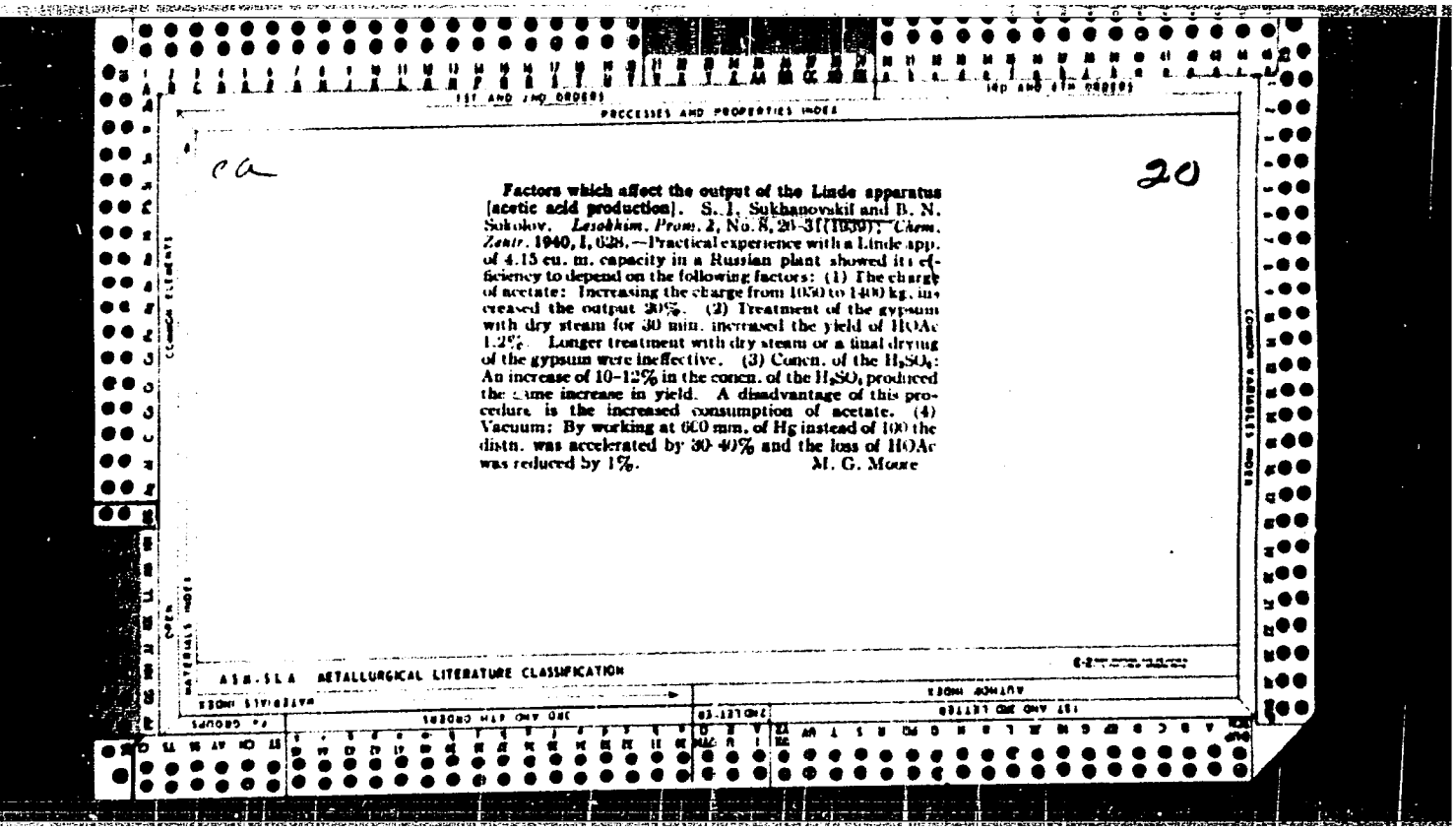


Calcium acetate. S. I. Sukhanovskii, V. D. Ugryumov and B. N. Sokolov. Russ. 50,176, Nov. 30, 1939. To obtain Ca acetate free from formate, the vapors from wood distn. are treated with a soln. of NaOH or NaOAc in amt. not in excess of 50% of that needed theoretically to combine with the formic acid, then treated in the usual way with $Ca(OH)_2$.



PROCESSES AND PROPERTIES INDEX

ca

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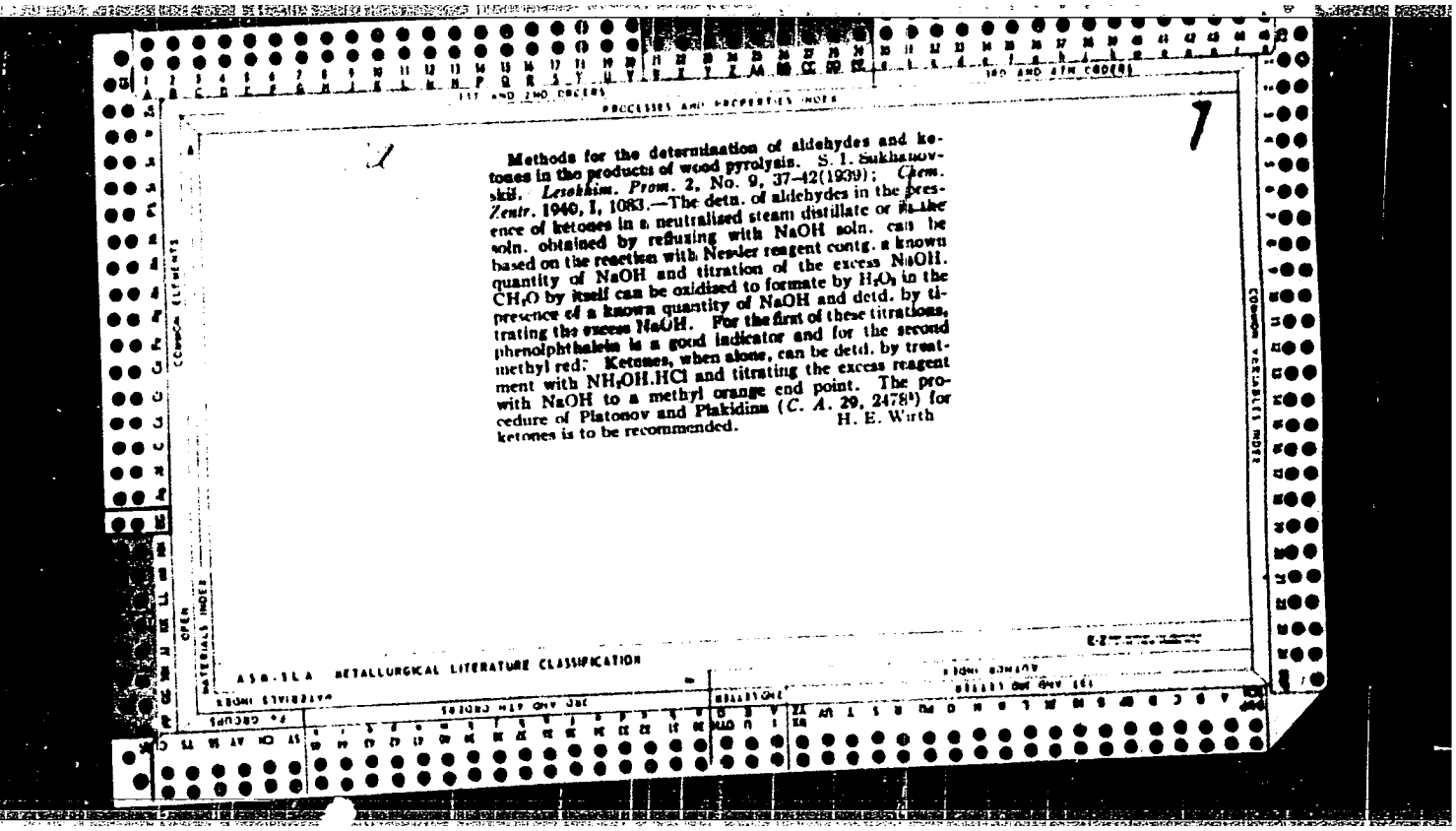
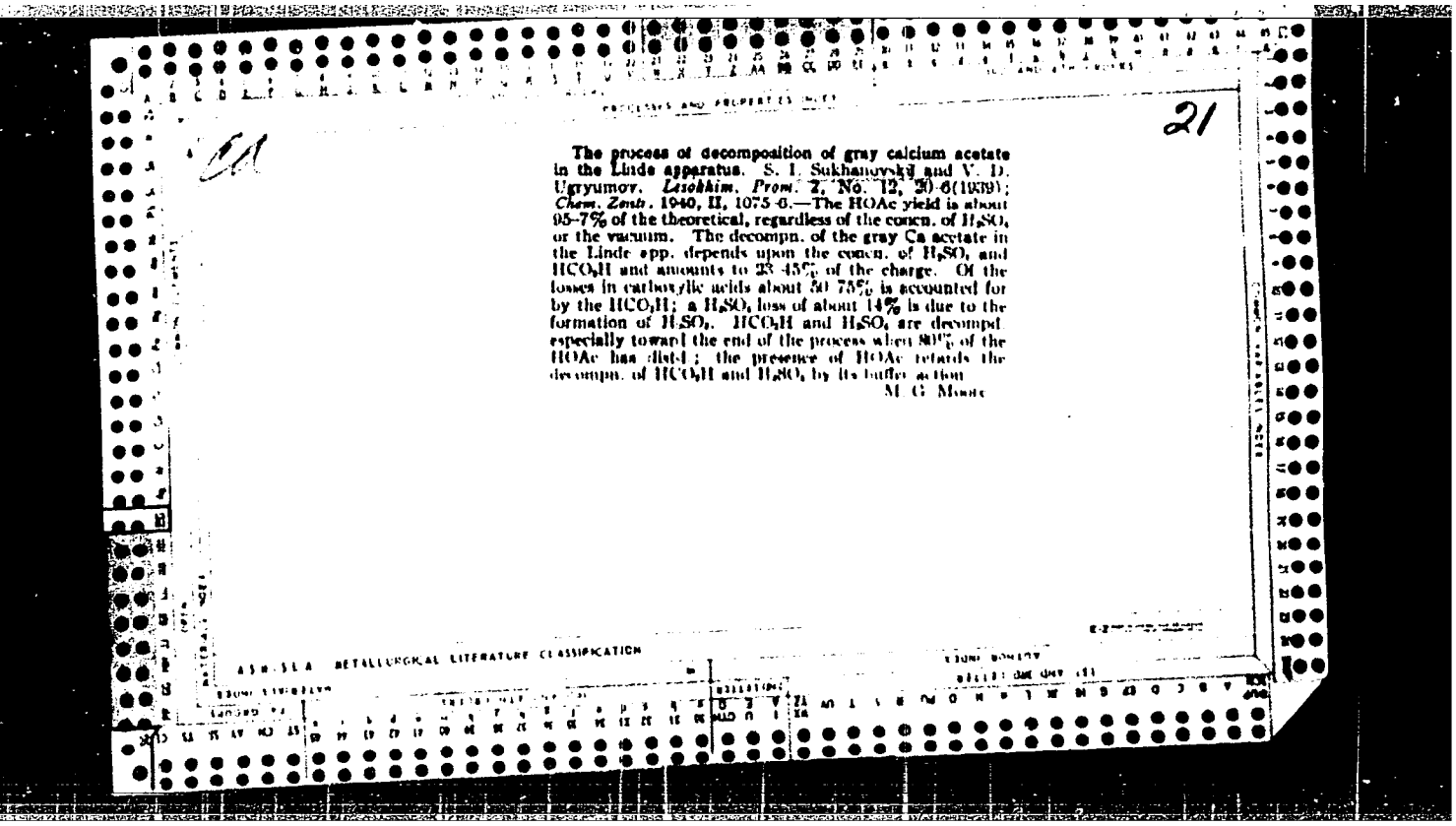
Factors which affect the output of the Linde apparatus [acetic acid production]. S. I. Sukhanovskii and B. N. Sokolov. *Lesokhim. Prom.* 2, No. 8, 20-31 (1939); *Chem. Zentr.* 1940, I, 628.—Practical experience with a Linde app. of 4.15 cu. m. capacity in a Russian plant showed its efficiency to depend on the following factors: (1) The charge of acetate: Increasing the charge from 1050 to 1400 kg. increased the output 30%. (2) Treatment of the gypsum with dry steam for 30 min. increased the yield of HOAc 1.2%. Longer treatment with dry steam or a final drying of the gypsum were ineffective. (3) Concn. of the H_2SO_4: An increase of 10–12% in the concn. of the H_2SO_4 produced the same increase in yield. A disadvantage of this procedure is the increased consumption of acetate. (4) Vacuum: By working at 600 mm. of Hg instead of 100 the distn. was accelerated by 30-40% and the loss of HOAc was reduced by 1%. M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Methods for the determination of aldehydes and ketones in the products of wood pyrolysis. S. I. Sukhanovskii. *Lesokhim. Prom.* 2, No. 9, 37–42(1939); *Chem. Zentr.* 1940, I, 1083.—The detn. of aldehydes in the presence of ketones in a neutralized steam distillate or in the soln. obtained by refluxing with NaOH soln. can be based on the reaction with Nessler reagent contg. a known quantity of NaOH and titration of the excess NaOH. CH_2O by itself can be oxidized to formate by H_2O_2 in the presence of a known quantity of NaOH and detd. by titrating the excess NaOH. For the first of these titrations, phenolphthalein is a good indicator and for the second methyl red. Ketones, when alone, can be detd. by treatment with $NH_2OH.HCl$ and titrating the excess reagent with NaOH to a methyl orange end point. The procedure of Platonov and Plakidina (*C. A.* 29, 2478[9]) for ketones is to be recommended.

H. E. Wirth



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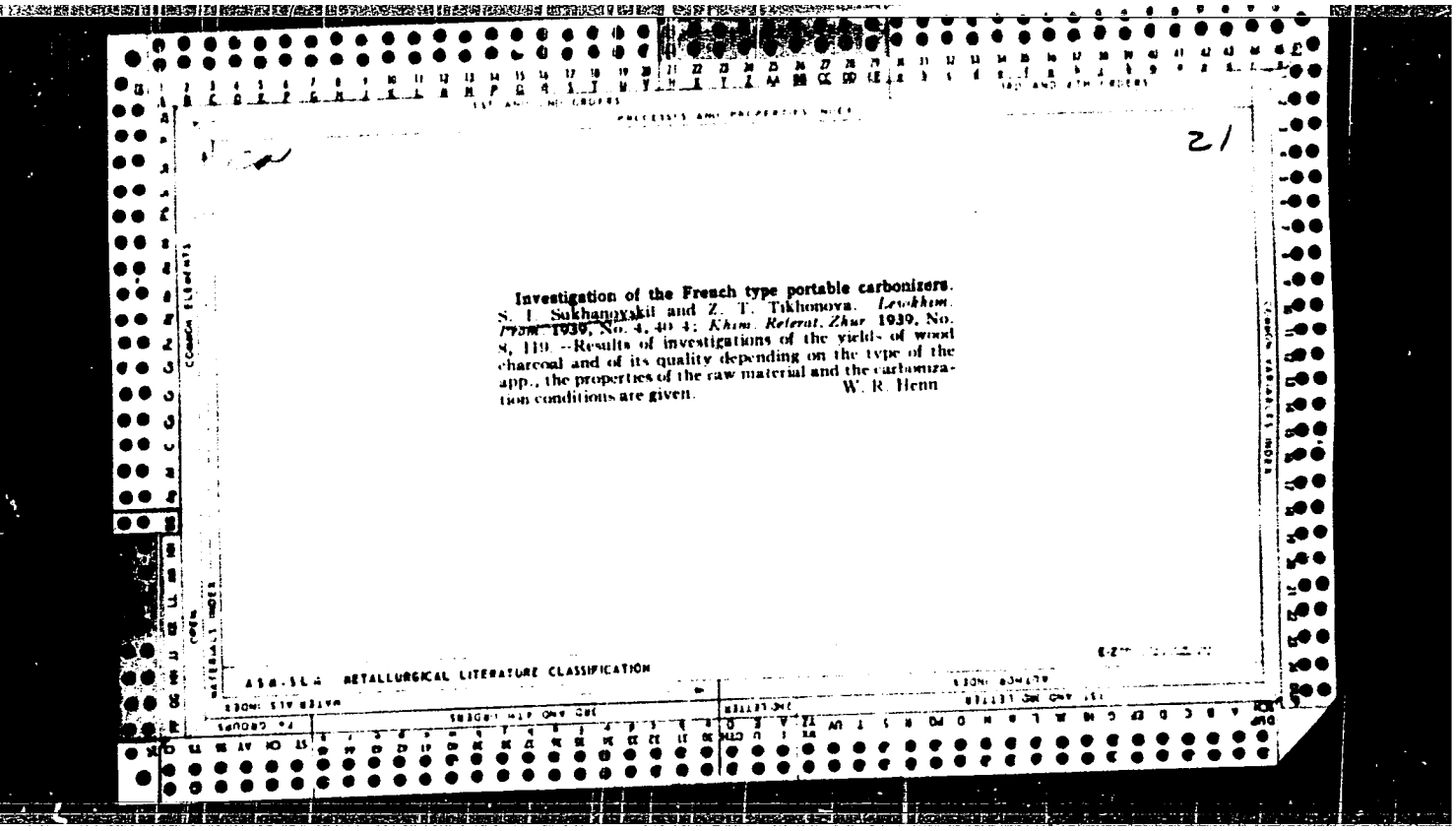
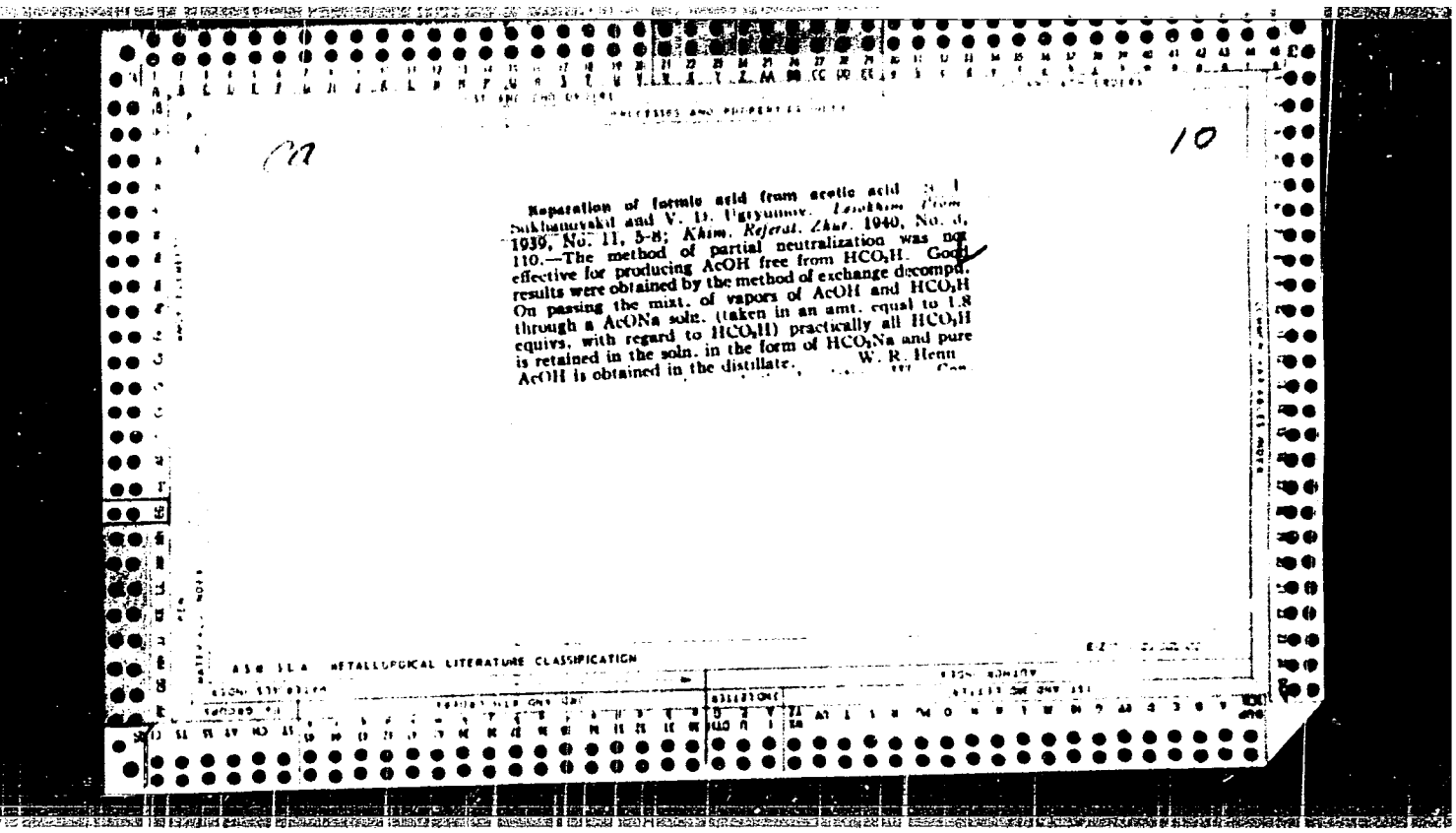
The process of decomposition of gray calcium acetate in the Linde apparatus. S. I. Sukhanovskiĭ and V. D. Ugryumov. *Leskhim. Prom.* 2, No. 12, 30-6(1939); *Chem. Zentr.* 1940, II, 1075-6.—The HOAc yield is about 95–7% of the theoretical, regardless of the concn. of H_2SO_4 or the vacuum. The decompn. of the gray Ca acetate in the Linde app. depends upon the concn. of H_2SO_4 and HCO_2H and amounts to 23–45% of the charge. Of the losses in carboxylic acids about 50–75% is accounted for by the HCO_2H; a H_2SO_4 loss of about 14% is due to the formation of H_2SO_3. HCO_2H and H_2SO_4 are decompd. especially toward the end of the process when 80% of the HOAc has distd.; the presence of HOAc retards the decompn. of HCO_2H and H_2SO_4 by its buffer action.

M. G. Moore

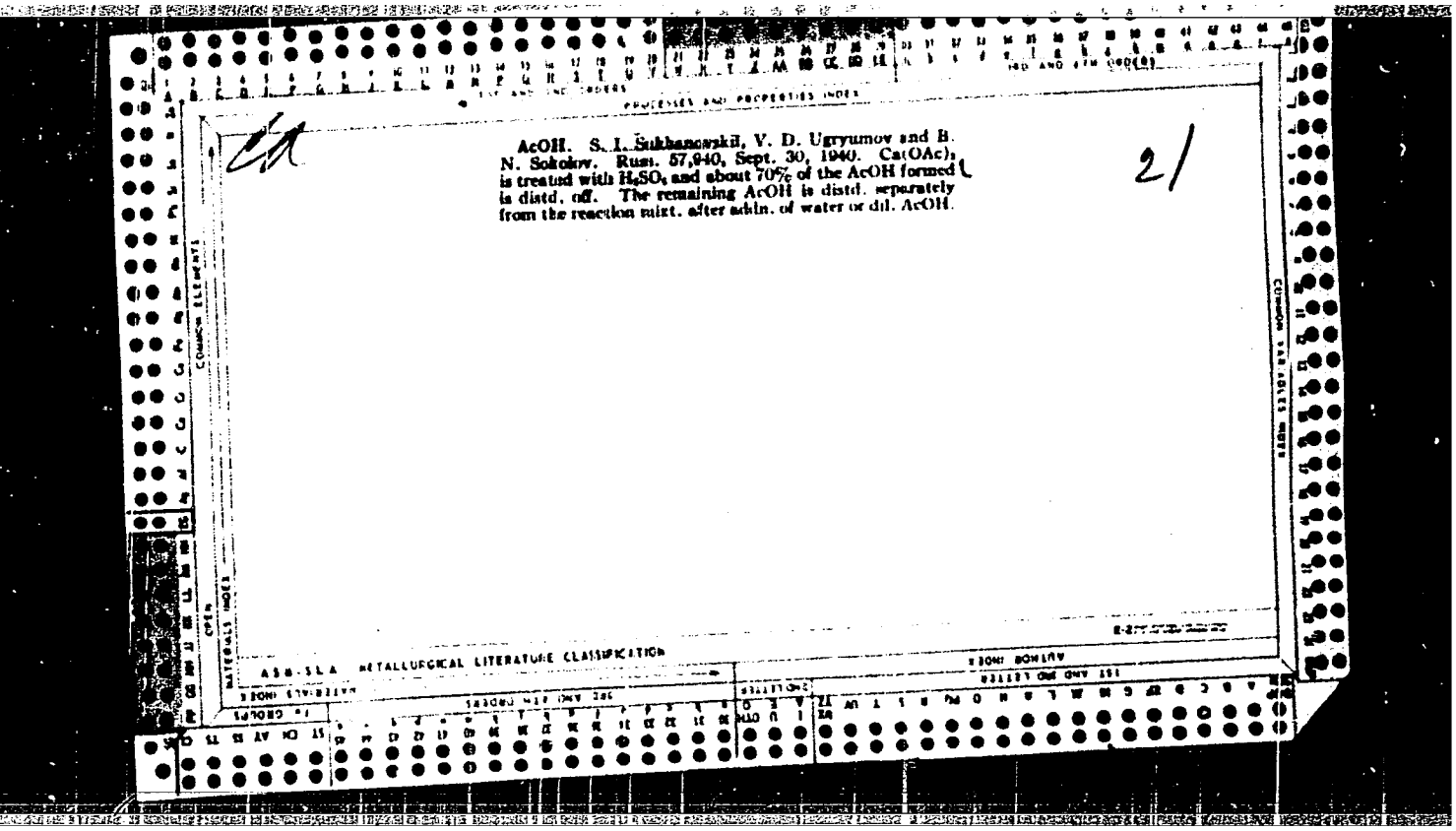
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Investigation of the French type portable carbonizers. S. I. Sukhanovskii and Z. T. Tikhonova. *Lesokhim. Prom.* 1939, No. 4, 40-4; *Khim. Referat. Zhur.* 1939, No. 8, 119.--Results of investigations of the yields of wood charcoal and of its quality depending on the type of the app., the properties of the raw material and the carbonization conditions are given. W. R. Henn



Separation of formic acid from acetic acid [illegible] Sukhanovskii and V. D. Ogiyunov. *Leichtmet. Prom.* 1939, No. 11, 5-8; *Khim. Referat. Zhur.* 1940, No. 3, 110.—The method of partial neutralization was not effective for producing AcOH free from HCO_2H. Good results were obtained by the method of exchange decompn. On passing the mixt. of vapors of AcOH and HCO_2H through a AcONa soln. (taken in an amt. equal to 1.8 equivs. with regard to HCO_2H) practically all HCO_2H is retained in the soln. in the form of HCO_2Na and pure AcOH is obtained in the distillate. W. R. Henn



AcOH. S. I. Sukhanovskii, V. D. Ugryumov and B. N. Sokolov. Russ. 57,940, Sept. 30, 1940. $Ca(OAc)_2$ is treated with H_2SO_4 and about 70% of the AcOH formed is distd. off. The remaining AcOH is distd. separately from the reaction mixt. after admix. of water or dil. AcOH.

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